1986

Consumer Satisfaction At The Sub-system Level: A Study Of The Distribution System For New Automobiles

Carole Pascale Duhaime

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CONSUMER SATISFACTION AT THE SUB-SYSTEM LEVEL: A STUDY OF THE DISTRIBUTION SYSTEM FOR NEW AUTOMOBILES

by
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Submitted in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy

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June 1986

ISBN 0-315-29477-9

ABSTRACT

Past research in the consumer satisfaction/dissatisfaction (CS/D) area focussed mainly on goods and services, ignoring the distribution system of products. This omission provides an incomplete understanding of the reality facing consumers since the consumption of goods and services is a process which comprises the evaluation not only of the products consumed but also of the different enterprises producing, distributing and servicing these products. This study focusses on this previously unexplored area of CS/D with the objective of filling some of the theoretical gaps and providing a guide to managerial and public policy action. After reviewing past CS/D studies, a process model based on the Expectancy Disconfirmation paradigm is developed. Using a survey methodology and the analytical techniques of Multiple Regression and Analysis of Covariance, this study then empirically tests part of this model by investigating consumer satisfaction/dissatisfaction with the distribution system for new automobiles in one province of Canada.

The results support the Expectancy Disconfirmation theory of CS/D. At each stage of the buying process, satisfaction is a direct function of both the level of expectations held by the consumer prior to engaging in the particular stage and the extent to which those expectations are positively or negatively disconfirmed. The results also provide evidence of the existence of consumer tolerance regions at least with respect to negative disconfirmation. Expectations are positively related to disconfirmation levels, a finding which

can be explained by the fact that consumers evaluated a service rather than a product. Finally, overall satisfaction with the distribution system is a function of search, servicing and product performance satisfaction.

The implications of this study are that automobile dealers should focus on improving buyers' expectations, providing superior after-sales service, maintaining well trained salespeople, rectifying service lapses and providing feedback to manufacturers. Public policymakers can help consumers by developing educational programs aimed at developing consumer skills and knowledge of what dealers can and should provide them.

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the help of several people. I would like to thank, first of all, Professors John R. Kennedy and Terry Deutscher who never lost faith in me and helped me greatly by their constructive criticisms. Professor Kennedy, my supervisor, kept me going when at times the level of frustration seemed overwhelming. I am also very grateful to Johanne Morissette, Brigitte Dionne and Normand Duhaime for several long hours of questionnaire folding and stamp licking.

Three organizations also contributed greatly to the completion of this study. The University of Western Ontario and l'Ecole des Hautes Etudes Commerciales de Montreal provided financial support while the Ministry of Transportation of Ontario supplied the names of new automobile buyers for the mailing list. Several new automobile dealers from the London region also helped in designing the research instrument while students enrolled at the Business School of the University of Western Ontario willingly pre-tested the questionnaire.

My husband, Christopher Ross, deserves very special thanks. In addition to providing moral support for several years, he helped by editing my English and by listening to me talking about the dissertation during the day and dreaming aloud of my research problems during the night. Christopher gave me the love and understanding needed for creating the moral climate necessary for research. He also took care of our daughter Alix and did more than his share

of domestic chores so that I could devote most of my time to the dissertation. Christopher, you are the greatest.

Finally, I would like to dedicate this thesis to my parents Mariette and Robert who provided me with the encouragement and motivation to complete all my academic endeavours.

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CHAPTER I

INTRODUCTION

The investigation of consumer satisfaction/dissatisfaction is a major concern of public policymakers, managers and researchers. While this concern has stimulated much research, the focus of the studies has been on consumer satisfaction/dissatisfaction (CS/D) with goods and services. Thus a major area which has not been investigated is consumer satisfaction/dissatisfaction with the distribution system for goods and services. This thesis focusses on this previously unexplored area of CS/D with the objective of filling some of the theoretical gaps and providing a guide to managerial and public policy action. Using a survey methodology this study investigates the degree of consumer satisfaction/dissatisfaction with the distribution system for automobiles in one province of Canada. After reviewing past CS/D studies and building a theoretical model, the thesis discusses the method of data collection, the analytical techniques employed and the results of the study. The implications of the results of the study for public policymakers, managers and CS/D theory are also pointed out.

The desire to monitor and measure consumer satisfaction results from a number of environmental factors. For instance, increasing rates of inflation and the high cost of money have influenced the values and attitudes of consumers towards business and marketing practices. Numerous articles in the business press suggest that many consumers are more interested in quality rather than quantity

(Allentuck, 1982; Gregg, 1984; Harrigan, 1985). Quality of life in general and, at a more specific level, overall satisfaction with the products and services available in the marketplace are among their major concerns. Furthermore, a greater quantity of and improvement in the quality of mass communication, together with a better-educated population, encourage the formation of strong, well-organized groups which act on behalf of consumers and present their problems to different publics: corporations, governments and the general public. These environmental changes stimulate the development of complaint-handling mechanisms by some firms, and the emergence of pro-consumer legislation both in Canada and in the United-States. Despite these efforts, however, there is still evidence that significant numbers of consumers remain dissatisfied, at least with some aspects of the market system (Ash, 1980).

Using a broad array of products and services, academics and marketing researchers who investigate CS/D focus on measuring levels of consumer satisfaction and modeling the factors contributing to its development. These scholars propose several theories to explain CS/D, including the Expectancy Disconfirmation paradigm, the Utility theory and the Complaining Behaviour approach. So far, the most widely accepted approach is the Expectancy Disconfirmation theory. But despite its widespread acceptance, however, much remains to be known about this theory. For example, this theory conceptualizes satisfaction in terms of initial expectations, perceived performance, disconfirmation of expectations and subsequent levels of satisfaction. At the time of initiating this thesis, however, few researchers

had examined the relationships among all these concepts simultaneously. Furthermore, scholars tend to examine the Expectancy Disconfirmation theory mainly at the product/service and at the enterprise levels, and not at the system level. This level concerns the operation of the marketing system at large. It includes the activities and firms involved in the manufacturing, distribution and servicing of all goods and services offered in the marketplace. It thus encompasses both the product/service and the enterprise levels. Is the Expectancy Disconfirmation theory relevant to explain consumer satisfaction at the system level? This thesis will explore this particular issue.

Czepiel, Rosenberg and Akarele (1975) define system satisfaction as the consumer's subjective evaluation of the total benefits received from the operation of the marketing system. This definition of system satisfaction is very broad, for it considers the consumption of all consumer goods and services as a whole. The lack of conceptual specificity at the system level probably accounts for the relative lack of interest so far shown by researchers in system satisfaction. For policymakers, the study of consumer satisfaction at such a broad level does not permit the diagnosis of the specific causes of consumer dissatisfaction, nor does it facilitate the determination of priorities for developing consumer protection programs. For researchers and scholars, this definition presents substantial problems of measurement. For instance, how can consumer expectations about something as large and as imprecise as "the operations of the marketing system" or the subsequent levels of disconfirmation

be measured?

Notwithstanding its numerous drawbacks, the study of consumer satisfaction at the system level presents an advantage. It takes into consideration the reality facing the individual as a consumer. The purchase and consumption of products and services involves several steps, activities, and decisions; it also takes time. It is thus a process which comprises the evaluation not only of the products consumed but also the different enterprises producing and distributing these products, the services offered by these firms, and the factors influencing the consumption of these products. In other words, the conceptualization of consumer satisfaction at the system level takes into consideration the factors surrounding the purchase and consumption of products and services. An approach is therefore needed which provides the advantages of investigating consumer satisfaction at the system level while circumventing the drawbacks of this level of conceptualization. The study of consumer satisfaction at the sub-system level meets these criteria. In this context, a sub-system is any part of the total marketing system which has the characteristics of a "system", i.e. "a group of units so combined as to form a whole and to operate in unison" (The Merriam-Webster Dictionary, 1974). An example of such a sub-system is the distribution system for a specific durable product such as a dish-washing machine.

Of great importance to consumers is the retailing sector. To keep up with changes in technology and in the environment, North American

retailers recently introduced several innovations, including the universal product code (UPC), automated warehouse operations, computerized inventory systems and automated teller machines. In spite of these innovations, discrepancies still exist between consumers' and retailers' perceptions of several aspects of retailing (Jolson and Spath, 1973; McClure and Ryans, 1968; Moyer and Whitmore, 1976). For example, there appears to be some confusion between the retailer's understanding of patronage factors and the retailer's fulfillment of consumer needs. The investigation and understanding of consumer satisfaction with the retailing sector can help retailers better understand and satisfy consumers' needs and wants. A first step in this direction would be the measurement, at the attribute level, of consumer satisfaction with any of the sub-systems that are part of the retailing sector.

1.1 OBJECTIVES OF THE STUDY

This study has two main objectives:

1) To model the major determinants of consumer expectations, disconfirmation and levels of satisfaction, and the relationships among them, at the sub-system level.

2) To test the model empirically with recent purchasers of new automobiles using the distribution system of new automobiles as the sub-system.

Several factors influenced the choice of the distribution system of new automobiles as the sub-system for analysis. As mentioned by Moyer and Whitmore (1976), about one quarter of all retail trade in North America is related to the automobile. Furthermore, motor

vehicle dealerships alone account for nearly one-fifth of all retail outlet sales. Thus, the distribution system for automobiles is one of the largest on the continent. While it is large and complex, researchers seem to give little consideration to the overall effectiveness of the channels that handle automotive products, at least from the final consumer's viewpoint. A recent study by Ash (1980) shows a significant amount of consumer dissatisfaction with auto repairs and service. Another study by Bernacchi, Kino and Willette (1980) also reveals that 42.8% of the respondents were dissatisfied with automobile services under warranty. These results indicate a need for information on consumers' perceptions of car dealers. It seems, therefore, that auto repairs and service constitute a high priority for consumer protection programming (Ash, 1980).

1.2 RESEARCH CONTRIBUTION

This research study makes a contribution in three areas: consumer satisfaction/dissatisfaction theory, public policy and managerial decision-making. The specific implications for each area are summarized below.

CS/D Theory: The two objectives of this study consist of modeling and testing a model of CS/D at the sub-system level. In the past, several empirical and experimental studies examined the relationships among three or four central constructs. For example, Swan, Trawick and Carroll (1982) studied the relationships between expectations, disconfirmation and satisfaction. Oliver and Westbrook (1982) exami-

ned the relationships among disconfirmation, satisfaction and attitudes. Evans (1983) concentrated on the relationships among satisfaction, equity, attitude and behavioral intention. These studies will be discussed in greater detail in the next chapter. But apart from one study (Thirkell, 1980), at the time of initiating this research virtually none had explored all the key constructs within the confines of a single study. Thirkell (1980) explored a process model of CS/D at the product level. But so far, no study has specifically tested a CS/D process model at any other level (enterprise or system).

As mentioned earlier, one of the reasons for this lack of interest is the problem of measurement associated with the system level. This study of consumer satisfaction at the sub-system level, however, avoids this measurement problem, while offering the advantages associated with the systemic view. For example, not only does it view consumer satisfaction as the end result of a process, but it also incorporates the factors influencing the consumer's evaluation of the total experience with the market. In other words, the sub-system level presents a complete view of the consumer's experience and thus contributes to a better understanding of consumer satisfaction. Consequently, this study synthesizes a number of relationships derived from previous studies, while also testing the relevance of the Expectancy Disconfirmation theory at the sub-system level.

Public Policy: This research study can aid public policymakers by measuring consumer satisfaction with the distribution system of

new automobiles. Since the study measures consumer satisfaction at the attribute-specific level, the findings highlight the major problems and sources of consumer dissatisfaction in the area of new car sales and service. These findings can provide guidelines to policymakers in setting priorities for consumer protection programs.

Managerial: Finally, this research study holds implications for managers. Firstly, the research model includes evaluations of consumer activities and experiences prior to the purchase decision. By measuring the impact of some of the controllable prepurchase factors upon subsequent levels of expectations and disconfirmation, the findings provide managers with an indication of the effectiveness of their communication with consumers, at least in the area of selling and servicing new cars.

Secondly, the measurement of consumer satisfaction with car dealers at the attribute-specific level indicates the major areas of consumer dissatisfaction and thus allows managers to take corrective actions to improve the distribution system of new cars.

1.3 ORGANISATION OF THE THESIS

Chapter II summarizes the existing CS/D literature. This chapter also describes the major findings derived from empirical and experimental studies performed in this field, as well as the more widely accepted theories used to explain CS/D. It indicates the gaps in

the literature and the need for further research in the area. Chapter III builds upon and integrates the different findings derived from the literature. It presents the conceptual model of consumer satisfaction at the sub-system level which guides this research. This chapter also includes the definitions and the operationalisation of the variables selected for analysis, as well as the formal hypotheses to be tested.

Chapter IV summarizes the research methodology. It presents overall response rates and describes the characteristics of the research sample and the quality of data obtained. It also includes some descriptions of dependent and intervening variable distributions. And finally, it discusses the reliability and validity of the scales used in this research.

Chapters V and VI discuss the testing of the formal hypotheses. Chapter V focusses on the interrelationships existing among the dependent and intervening variables (Hypotheses H1 to H6). Chapter VI explores how consumers' personal characteristics, their prepurchase search and their prior experience influence their expectations and subsequent disconfirmation levels (Hypothesis sets H7 to H12).

Finally, Chapter VII summarizes the results of the study. It also discusses the principal implications derived from the empirical findings, as they apply to managers, public policymakers and to CS/D theory. It ends by presenting some questions for future research.

CHAPTER II

LITERATURE REVIEW

Consumer satisfaction as a field of study in marketing is a fairly recent phenomenon with its beginnings dating back only to the seventies. However, the idea of consumer satisfaction itself is much older, probably preceding modern business and economic thought. For a long time, the concept lacked substantive meaning grounded as it was on conventional wisdom, normative prescription or reasoned thought based on observation (Czepiel, Rosenberg and Surprenant, 1980). In other words, the concept emerged from economic theory which views consumer satisfaction as the goal of the economic system. To be successful, therefore, business has to satisfy customers' needs and wants. Reasoned thought also suggests that satisfaction includes more than the meeting of functional needs and that the insights and the methodology of the behavioral sciences are necessary to understand, measure and use the concept.

Today, consumer satisfaction as a field of study seeks to answer the following questions: What is consumer satisfaction? What are the variables that contribute to or detract from it and how do they work? How is it best measured? What is the relationship between satisfaction and subsequent behavior? How can and should satisfaction data be used for managerial and public policy purposes? At what level (product, enterprise or system) should satisfaction data be collected, in order to make a useful contribution to managers and policymakers?

This chapter summarizes the existing literature as it attempts to answer these questions. Emphasis is put on four different areas of this field of study: a) definition of the concept, b) existing theories, c) levels of satisfaction, and d) a process model of consumer satisfaction.

2.1 DEFINITION

To date, there is still no generally agreed-upon definition and measure of consumer satisfaction or dissatisfaction. Hunt (1977), in the proceedings of the first annual conference on Consumer Satisfaction/Dissatisfaction (CS/D), reports that there are at least nine different definitions of the consumer satisfaction concept. Even though several additions have been made to the definitions of the term, as yet none has attained general consensus.

Andreasen (1977) defines consumer satisfaction/dissatisfaction as the extent to which consumers' needs and wants are met. For Miller (1977), consumer satisfaction results from the interaction of a) expectations about anticipated performance and b) evaluation of perceived performance. Czepiel and Rosenberg (1977) argue that as a concept, dissatisfaction has substantive meaning far exceeding that of satisfaction since it implies many actions: angry consumers, worried managers, protesting consumer advocates, and rule-making government officials. According to these authors, consumer satisfaction is an attitude in the sense that it is an evaluative orientation

that can be measured. It is also a special kind of attitude since it exists only after the purchase or consumption of the attitude object. Consumer satisfaction can therefore be portrayed as a comparison of the perceived actual purchase/consumption experience with the motivations which underlay the action and the previously formed expectations of the experience. This comparative evaluation is further modified by standards concerning desirable and normative outcomes (Czepiel and Rosenberg, 1977).

Handy (1977) defines consumer dissatisfaction as the gap or distance between the consumer's "ideal" attribute combination for a particular product or service and the attribute combination of the product or service offered in the marketplace which comes closest to this ideal. Dissatisfaction is thus a multidimensional concept which focusses on market performance rather than on consumers' satisfaction with different brands within a product line. According to Hunt (1977), satisfaction is a kind of stepping away from an experience and evaluating it. It is not the pleasurableness of the experience, but the evaluation rendered that the experience was at least as good as it was supposed to be. As such, it becomes a quasi-cognitive construct. Hunt also describes dissatisfaction as the interaction of the product/situation with the individual's expectations/experience. In his view, CS/D can only be understood and predicted upon consideration of the whole interaction.

More recently, researchers have been concerned about the difference between attitude and satisfaction. Oliver (1981) suggests a concep-

tual difference between these two constructs. He defines satisfaction as an "evaluation of the surprise inherent in a product acquisition and/or consumption experience". The surprise or excitement lasts only a short period of time, so that satisfaction soon wears away and attitude towards purchase replaces it. Oliver and Westbrook (1982) specify that while attitude is a liking for the absolute object or its future purchase, satisfaction is a liking for the disconfirmation experience surrounding the past purchase of the object.

Day (1983) generally adheres to this view when he defines satisfaction/dissatisfaction as "an emotional response manifested in feelings, which is conceptually distinct from cognitive responses, brand affect and behavioral responses". Day also notes that the concept of satisfaction is not "a kind of attitude". Hunt, however, does not agree with Day's position:

> "An emerging view is that satisfaction is an affective (like/dislike) psychological state that is the product of an evaluation of the product/service. The process of evaluation may be cognitive (Oliver, 1980). The present author feels that the concept of satisfaction should also include a cognitive element" (1983, p. 126).

Ortinau (1979) subscribes to this view. He sees satisfaction as a perceived or felt attitude toward a purchased object.

Several factors can account for the multiplicity of definitions. The first one is that the definition of consumer satisfaction or dissatisfaction depends upon the specific perspective adopted in the study of CS/D. For instance, Renoux (1973) makes a distinction between Macro and Micro-Marketing System dissatisfaction. As descri-

bed later in section 2.3, the first type refers to discontent that is not associated with specific products, dealers or producers. The second type involves discontent at one of the three following levels: shopping-system, buying-system and consuming-system. Another factor is whether the focus of discussion is CS/D with products or services in general or with some particular product or service. The first case is very close to measuring quality-of-life while CS/D with a particular brand or product class is at the level of worrying about importance and salience of product attributes (Hunt, 1977). A third factor affecting the definition is the goals adopted by the users of the concept. Is the goal the minimization of dissatisfaction among the population, or an increase in the general level of satisfaction? A final factor is the view that consumer satisfaction is both the result of a comparison process following a purchase experience and a determinant of consumer actions (complaining behavior or repeat purchase behavior). This situation adds to the confusion existing among the different definitions. Deciding which is most useful is not an easy task.

Apart from the diversity of views on the definition of the satisfaction/dissatisfaction concept, general agreement on the multidimensional character of the term raises the question of measurement. Some researchers consider satisfaction as an overall summary measure. Day (1977a) wonders if people are really able to identify the attributes they consider, let alone tell how important each one is and how they put it all together to arrive at an overall rating. Czepiel and Rosenberg (1976) agree that consumer satisfaction can

be thought of as a single overall evaluative response to many different facets. Other researchers (Handy and Pfaff, 1975) feel that satisfaction is best measured by a combination of facets or attributes. They state "Response to an overall satisfaction measure only crudely measures overall satisfaction with food products... Actual responses represent the person's immediate reaction to a complex situation" (p. 12).

Another issue is the choice between measuring satisfaction or dissatisfaction. In addressing this question, Handy and Pfaff (1975) view the concepts of satisfaction and dissatisfaction as the opposite ends of a continuum rather than as two different concepts. But if satisfaction is a multidimensional concept, there is a definite possibility that consumers will not be satisfied with all the attributes of a product or service. Some questions still remain unanswered: What is the relative weighting of satisfaction and dissatisfaction in determining overall satisfaction? Is overall satisfaction more dependent on what pleases or what displeases the consumer?

One of the consequences of the multiplicity of definitions and viewpoints is the development of several theories of consumer satisfaction/dissatisfaction. The next section presents the three major theories developed in the last decade.

2.2 THEORIES

There are several theories of consumer satisfaction/dissatisfaction. Some of them (Latour and Peat, 1979; Ortinau, 1979; Scott, 1980; Sirgy, 1982) remain at the conceptual level, without any empirical testing. Others have been thoroughly investigated. Three theories seem to dominate the literature: the Utility theory, the Complaining Behavior theory and the Expectancy Disconfirmation theory. This section discusses these theories.

Utility theory.

Based on traditional economic theory, the Utility theory relates the individual's overall level of satisfaction or dissatisfaction to the psychological distance between the product and the individual's ideal product in a multidimensional space with each dimension representing a product attribute. The Utility theory assumes that the consumer is a rational decision-maker who seeks to maximise total utility or overall satisfaction. The "ideal" product is the one which provides the individual consumer with the highest possible level of utility. It provides a more or less stable standard against which all available products are evaluated. The product which is closest to the ideal point provides the maximum attainable level of satisfaction in the market. It is possible that several brands in a product class can be sufficiently close to the ideal point to be judged as highly satisfactory. It is also possible that all of the brands in a product class may be so distant from the ideal that even the closest brand is judged as highly unsatisfactory by

the consumer. The distribution of individual ideal points throughout the product class reflects the diversity of preferences (Kuehn and Day, 1962).

The Utility theory has some advantages. It presents a conceptualization of the relationship between product attributes and the qualities desired by consumers. It also provides a useful paradigm for thinking about preferences for alternative versions of a product. However, the theory also has several disadvantages. For example, the notion of a rational consumer presents some difficulties for most marketers, unless it is within boundaries not specified in this theory. Also, the methodology designed to test and use the Utility theory is still at the development stage. So far, only a few studies approach the direct measurement of consumer satisfaction from the perspective of the Utility theory. They deal with the development of an "Index of Consumer Satisfaction" and measure consumer satisfaction at an aggregate level (Lingoes and Pfaff, 1972; Pfaff, 1972). This approach is useful for monitoring satisfaction over time and providing a social indicator of market performance. It is also useful to marketers for discovering opportunities for new products.

Complaining Behavior Approach.

This second approach views complaining behavior as a surrogate for consumer dissatisfaction. Instead of directly measuring satisfaction, proponents of this theory infer dissatisfaction from consumer complaining behavior. The main questions addressed in this

stream of research are the following: Who are the complainers? How do they complain? What are the specific causes for their complaint(s)? How are they treated when they complain, and how do they differ from other consumers?

Students of CS/D suggest a number of models to explain consumer complaining behavior. Landon (1977) offers a phenomenological model which conceptualizes complaint behavior as a function of four factors: a) the presence of consumer dissatisfaction, b) the importance associated with that level of dissatisfaction, c) the expected benefit from complaining and d), the personality of the individual. Day and Landon (1976) and Warland et al. (1975) provide support for the approach taken by this model that only a small percentage of dissatisfied consumers actually complain. Further, the model recognizes the possibility that dissatisfaction may not be a necessary condition for complaining behavior. Consumers may complain if they feel they can get something out of it whether they have a legitimate concern about product performance or not. Landon also considers the importance of the product to the consumer. For consumers to complain, the product itself must be of sufficient importance to be worth the effort and cost of complaining. Finally, Landon recognizes the impact of personality on complaining behavior. He sees personality as a mediating variable throughout his model. Landon did not test the proposed functional relationships. However, the model stimulated a lot of thinking among the marketing community. Several researchers used it as a basis for further research while others tested parts of his model.

A second model, proposed by Richins (1979), focusses only on specific dissatisfactions encountered in the marketplace. It applies only to consumer product dissatisfactions and not to industrial goods. Contrary to other models of consumer satisfaction/dissatisfaction, in this model a purchase does not have to occur for the consumer to experience dissatisfaction. Richins' model includes three major cognitive processes: evaluation of the satisfaction/dissatisfaction, an attributional evaluation, and an evaluation of recourse alternatives. The consumer's pre-existing attitudes and beliefs as well as exogenous variables influence these three processes. The exogenous variables are of two kinds: individual (consumer's personality and values, time pressure, and financial status), and situational (the purchase and consumption environment, family and social setting). The outputs of the processes are changes in attitudes and beliefs about the product, the store where the product was purchased, and the manufacturer. Other outputs are changes in consumer's emotional states, intentions and behaviors. In this model, the recognition of dissatisfaction acts as a trigger on the processes. Also, both cognitive and emotional aspects make up the concept of dissatisfaction. Like Landon's model, Richin's model builds upon previous research results. It too remains at the conceptual level without any empirical verification.

According to Robinson (1979), consumer complaint behavior research can be divided into three basic categories. The first type uses surveys to determine dissatisfactions with goods and services in

an attempt to gain insights into types of complaints, actions taken, and the demographic correlates of subsequent behavior (Day and Landon, 1976; Levy and Surprenant, 1982; Robinson, Trebbi and Adler, 1983; Thomas and Shuptrine, 1975; Warland, Herrmann and Willits, 1975). The second category focusses on complaint files to develop descriptions of consumer complainers (Diamond, Ward and Faber, 1976; Zaichkowsky and Liefield, 1977). Thirdly, sociologists and political scientists often review citizen responses to fraud and problems with governmental agencies.

A review of complaining behavior research reveals the following findings. When dissatisfied, most consumers do not complain (Day and Landon, 1976; Diamond, Ward, and Faber, 1976; Thomas and Shuptrine, 1975). Noncomplainers are often unaware of available recourse, feel powerless to act or do not feel that complaining is worth the trouble (Robinson, Trebbi and Adler, 1983; Warland, Herrmann, and Willits, 1975). Noncomplainers differ from complainers on a variety of demographic measures (Diamond, Ward, and Faber, 1976; Robinson, Trebbi and Adler, 1983; Thomas and Shuptrine, 1975). Relative to complainers, noncomplainers tend to have lower incomes, lower educational levels, less political involvement, more pessimism about legislator interest in their problems and less general confidence in the state of the country. Robinson, Trebbi and Adler (1983) also find that loyal customers tend to complain more and that complainers generally enter the process with the conviction that they know the product, understand the issue and feel strongly about perceived inequity. Finally, Grabicke, Schaetzle and Staubach (1982)

show that the propensity to complain, a personality trait independent of the situation, can explain a substantial portion (in their study, 36%) of the total variance of complaining behavior.

The major criticism of this stream of research is that most studies are not generalizable, the complaint behavior dependent variables are typically oversimplified, and that the major focus of most of the research is on the analysis of demographic correlates (Robinson, 1979).

There is also growing evidence that complaining behavior should be viewed as a process, with causal linkages between variables. The recent process model described by Day (1983) is a step in this direction. This model, which will be described later in this chapter, is the latest attempt at developing a comprehensive model. It includes both the factors leading to consumer satisfaction/dissatisfaction and the cognitive affects and behavioral responses, including the complaining behavior which follow. As yet, however, no studies focus on validating process models or, for that matter, the other models presently available (Landon, 1977; Richins, 1979). Gaps exist in our knowledge of complaining behavior over time, suggesting the need for longitudinal studies using theoretically useful explanations of complaint behavior. Complaining behavior relative to the purchase/consumption of several products and services and the impact of culture and values on complaining behavior are still largely unexplored areas of CS/D.

Expectancy Disconfirmation Theory.

The Expectancy Disconfirmation theory relates consumers' overall level of satisfaction or dissatisfaction to the extent to which they feel that their prior expectations of product performance have been confirmed or disconfirmed in the consumption process (Day, 1977a). Katona (1958) suggests that expectations are "subjective notions of things to come". They also reflect anticipated performance (Churchill and Surprenant, 1982). As mentioned by Engel et al. (1973), an expectation is thus a type of hypothesis formed by the consumer regarding the consequences of an act; input of information after purchase will serve either to confirm or to reject this hypothesis. Positive disconfirmation occurs when objective product performance actually exceeds expectations. Negative disconfirmation takes place when the product's actual or objective performance cannot meet expectations for it. Expectations may be created and strengthened by corporate promotional mixes, past experiences, opinions of friends and associates, impartial product rating services, or general aspiration levels (Anderson and Hair, 1972). After the consumption experience, consumers, consciously or not, do have an evaluative reaction which results in either positive feelings (satisfaction) or negative feelings (dissatisfaction). The strength of these feelings relates to the magnitude of the difference between the perceived product performance and the level of expectations held by the consumer prior to the consumption process.

Oliver (1980) explains the relationships between satisfaction, expectations and disconfirmation in terms of Helson's (1959) adaptation level theory. This theory proposes that one perceives stimuli in relation to an adapted standard. Oliver assumes that expectations "perform the function of an adaptation level in that they define the standard against which subsequent performance is judged" (1980, p. 22). He further adds that disconfirmation acts as a major force causing movement away from the standard. The net effect is satisfaction or dissatisfaction (Oliver 1981, p. 28).

An important part of the research dealing with the Expectancy Disconfirmation theory focusses on testing the relationships between expectations, disconfirmation and consumer satisfaction. The basic model investigated views satisfaction as an additive function of expectations and disconfirmation. This model finds consistent support among researchers (Bearden and Teel, 1983; Churchill and Surprenant, 1982; Oliver, 1977a, 1979b, 1980; Swan, 1977; Swan and Trawick, 1980; Swan, Trawick and Carroll, 1980; Thirkell, 1980). However, the studies which examine the relationships between expectations and disconfirmation show conflicting results. Oliver (1977a, 1980) and Thirkell (1980) report that levels of disconfirmation are independent of the levels of expectations held at the time of purchase while Churchill and Surprenant (1982) describe a negative relationship between these two constructs in the case of a plant and a positive relationship in the case of a video player. However, these results can be attributed to the manipulation of expectations made in the context of their experiment. Again, while Bearden and Teel

(1983) report a positive relationship between these constructs in a survey investigating automobile repairs and services, Moore and Sheptrine's study (1984) reveals both a negative and a positive relationship between the two constructs. The direction of the relationship depended on the type of measurement used.

Apart from these studies which concentrate on the existence of a linear relationship between expectations and disconfirmation, Thirkell's work (1980) also deals with the possibility of a non-linear relationship between them. His study shows that the magnitude of disconfirmation in either direction (positive or negative) increases as a positive function of expectations. Furthermore, the magnitude of felt consumer satisfaction or dissatisfaction is a direct function of the level of prior expectations held. Thus, past research suggests that while there is sufficient evidence to show that satisfaction is an additive function of both disconfirmation and expectation level, there is still no conclusive evidence regarding the relationship existing between expectations and disconfirmation. This relationship will be examined in the current research. In particular, the current research will investigate whether such conflicting results relate to the type of products investigated.

A second stream of research attempts to explain satisfaction with a number of functional relationships between expectations and perceived product performance (Anderson, 1973). This research stream concentrates on three basic approaches. The first approach, the assimilation theory, based on Festinger's theory (1957) of cognitive

dissonance, states that any discrepancy between expectations and perceived product performance creates in the individual a state of psychological discomfort. This discomfort stimulates the consumer to reduce the tension generated, by changing perceptions of the product to bring it more into line with expectations. The result is the minimization of the discrepancy between expectations and product performance. Cohen and Goldberg (1970) voice one major criticism of the assimilation theory. They point out that this theory assumes that the individual, instead of learning from purchasing mistakes, actually increases the probability of making them again by trying to reduce post-purchase dissonance through the justification and rationalization of decisions.

Contrary to the assimilation theory, the contrast theory assumes that the consumer will magnify the difference between the product received and the product expected. In other words, if the objective performance of the product fails to meet expectations, the customer will evaluate the product less favorably than if there were no prior expectations for it. The contrast theory presumes that it is the surprise effect or contrast between expectations and outcome which causes the consumer to exaggerate or magnify the disparity.

The third approach, the assimilation-contrast theory, builds on the work performed by Hovland, Harvey and Sherif (1957). This theory maintains that there are zones or latitudes of acceptance or rejection in consumer perceptions. If the disparity between expectations and product performance is sufficiently small to fall into the consu-

mer's latitude of acceptance, there will be a tendency to assimilate the difference by rating the product more in line with expectations than its objective performance justifies. However, if the discrepency between expectations and actual product performance is so large that it falls into the zone of rejection, then a contrast effect comes into play and the consumer magnifies the perceived disparity between the product and the expectations for it.

Despite the numerous studies which attempt to validate each one of these theories, there is still no general agreement about the superiority of any of them. While Cardozo's study (1965) of subjects evaluating the desirability and quality of ballpoint pens supports the existence of contrast effects, Olshavsky and Miller's (1972) examination of his results reveals methodological problems. The anchors for the dependent measures varied as a function of whether expectations were high or low. LaTour and Peat (1979) also question the validity of Cardozo's contrast effect.

One investigation into the effects on product ratings of both overstatement and understatement of product quality, using tape recorders, appears to support the assimilation theory (Olshavsky and Miller, 1972). The results of their experiment suggest that overstatement results in more favourable product ratings. However, an examination of the methodology suggests that this interpretation may be questionable. Possible judging of the brand rather than the tested sample, demand characteristics and evaluation apprehension may all have tended to exaggerate the influence of the expectation-

producing information on subjects' judgments of product performance (LaTour and Peat, 1979).

Another experiment (Anderson, 1973) gives support to the assimilation-contrast theory. Anderson finds that consumers assimilate product ratings toward expectations until "the very high" condition when the contrast effect begins, causing a downturn away from expectations in evaluations of the product. He concludes that there is a point beyond which consumers will not accept increasing disparity between product claims and actual performance, at least for certain relatively simple or easily understood products. When consumers reach this threshold of rejection they perceive the product less favorably than at a slightly lower level of expectations. Anderson recognizes that his conclusions are not generalizable to all products since his experiment used a low-involvement, low-risk product. Further, Latour and Peat (1979) also question the validity of Anderson's conclusions because of methodological flaws similar to the one mentioned for the Olshavsky and Miller study.

Using field data on nine new products to look at the effect advertising has on consumer satisfaction with new products, Olson (1979) reveals that, in aggregate, consumers who are aware of advertising for new products rate those products no differently after use from those who are unaware of advertising. He concludes that these results provide support for the assimilation-contrast theory. He also adds that for products which perform well on their own, advertising may enhance satisfaction, but that for poorly performing pro-

ducts, advertising may detract from satisfaction. Olson's study presents some measurement problems which prevent us from completely accepting his conclusions. For example, he uses intentions to repurchase as a proxy for consumer satisfaction. A recent study by Oliver (1979b) shows that these measures cannot be used as substitutes given the low correlations existing between them.

Finally Thirkell (1980), in an investigation of consumer satisfaction with new cars, provides support for the contrast theory although modified by the existence of consumer tolerance regions with respect to negative disconfirmation.

The lack of consensus observed in the studies indicates that in order to understand how expectations relate to satisfaction, there is a need for further research. Gaps still remain in our understanding of how multiple sources of influence create different types of expectations. Future research, with manipulation checks and realistic experimental conditions may be a step in the right direction.

Within the Expectancy Disconfirmation approach, a third stream of research investigates the nature of expectations. More specifically, researchers focus upon the several dimensions of expectations. Day (1977a) conceptualizes expectations as a multidimensional construct. He further breaks it down into three categories:

(a) Nature of the Product. Anticipated benefits to be derived directly from the product or service itself influence expectations about

the nature and performance of the product or service. These expectations stem mainly from previous experience with that particular item and from advertising and personal influences.

(b) Costs and Shopping Efforts. Expectations in this second category derive from the costs and efforts expended prior to obtaining the direct benefits of the product or service. They include the time and expense involved in shopping for the product or service.

(c) Social Benefits of Purchase/Use. Some expectations originate with the social benefits or costs which will accrue to the individual as a consequence of the purchase. They represent the anticipated impact of the purchase on significant others. These expectations are particularly important for products with visible consumption, status products and jointly consumed products.

Day (1977a) sees several advantages in treating these three categories separately:

> "The functional attributes of the product are established by the manufacturer, and expectations about them can be manipulated to some extent by him. The costs to the consumer are less directly under the manufacturer's control and may depend to a considerable extent upon local and personal factors. The social factors are even more individual and personal and less subject to control by the manufacturer. Conceptualizing these aspects separately should help in dealing with individual differences when the measurement stage is reached" (p. 166).

Thirkell (1980) uses similar categories to which he adds a fourth category. He calls it "System Response" expectations. This category recognizes that consumer satisfaction is likely to be a function not only of the effort and money expended by the consumer (the support costs and efforts category) but also a function of how quickly and how well problems which do occur are rectified.

Swan and Combs (1976) in a survey involving students, look at the "expressive" (psychological) and "instrumental (physical) dimensions of a product (clothing) to determine the extent of their influence on consumer satisfaction and dissatisfaction. Their study assumes that only a limited set of attributes, the "determinant attributes", play a critical role in determining choice between alternatives, and hence satisfaction with postpurchase performance. Their findings suggest that satisfaction and dissatisfaction are linked to qualitatively different kinds of outcomes. These outcomes form a hierarchy such that instrumental requirements must be satisfied first before satisfaction can occur. Swan and Combs summarize the process of consumer response in the following terms:

> "In judging the performance of a product, the consumer compares a set of performance outcomes to the outcomes that were expected for the item. If the performance of the physical product was below expectations, then the product is likely to be categorized as dissatisfactory. If both instrumental and expressive outcomes were equal to or exceeded expectations, then the consumer will tend to judge the product as satisfactory" (p. 33).

They conclude, therefore, that future research should study the processes of expectation formation, the dimensions of product performance about which consumers have expectations, and the performance dimensions used by consumers to judge product performance.

Parallel to these studies, another stream of research concentrates on identifying the different types of expectations. Miller (1977) considers four types of expectations the consumer might use as comparison standards for performance evaluations: the Ideal, the Expected, the Minimum Tolerable, and the Deserved. The Ideal is the "wished

for" level. It represents what the consumer feels performance of the product, service or store "can be". The Expected is probably based on past average performance. It reflects what the consumer feels performance probably "will be". The Minimum Tolerable is the least acceptable level. It may reflect the only alternative an individual has for satisfying some want. It is the minimum level the consumer feels performance "must be". Finally, the Deserved adds an affective dimension that appears to be most critical in determining "feelings" of satisfaction, and especially of dissatisfaction. Miller sees it as being critically determined by the individual's evaluation of the "rewards and costs", or by the "investments and costs" of the relation. The Deserved level thus reflects what the individual, in the light of his investments, feels performance "ought to be" or "should be". Miller argues that the identification of the specific type of expectation is necessary for accurate measurement and prediction of consumer satisfaction levels, an important input for marketing management as well as public policy decisions. Miller also suggests that satisfaction, like acceptance or rejection of persuasive communications, may be conceptualized in terms of "latitudes" -latitudes of satisfaction, of indifference, and of dissatisfaction (Miller, 1977).

Miller did not test his ideas about consumer satisfaction. However, there have been attempts to validate the existence of Miller's four conceptual expectation types and to determine if they are good predictors of satisfaction/dissatisfaction. The results of one study (Gilly, Cron and Barry, 1983) indicate that two of the four expecta-

tion types -the Deserved and the Expected- emerge clearly as independent constructs with the Deserved disconfirmation type being the best predictor of satisfaction when compared to chance.

Even if Miller's expectation types are not yet completely validated, they are useful in that they encourage investigation into the nature of the expectations construct in greater depth. For example, Summer and Granbois's examination (1977) of two different types of expectations (Predictive -what consumers "expected" and Normative -what consumers thought "should be") in the context of a survey dealing with food products, uncovers a big gap between predictive and normative expectations held by consumers. Furthermore, they report that the consumers studied are good predictors of expected rates of problem incidence, yet reflect fairly high normative standards of what "should be".

Swan and Trawick (1980) and Swan, Trawick and Carroll (1980) build on the previous research studies in an empirical test of the conceptual distinction between two types of expectations. They define predictive expectations as the consumer's preusage estimate of the performance level that the product is anticipated to achieve. Desired expectations is the consumer's preusage specification of the level of product performance that would be necessary in order to satisfy or please the consumer. Before Swan and Trawick's study, the implicit assumption in the satisfaction literature was that satisfaction follows from the confirmation of expectations. In their study, the researchers consider the possibility that some

consumers may expect little and thus be dissatisfied even if expectations are confirmed. They show that when performance exceeds desired expectations, very high satisfaction results; performance equal to desired expectations gives substantial satisfaction; indifference results when performance equals predictive expectations; and performance below predictive expectations results in dissatisfaction. Swan and Trawick (1981), in another study investigating consumer satisfaction with a restaurant, conclude that levels of satisfaction and intentions toward the restaurant service are higher under positive disconfirmation of desired expectations than under positive disconfirmation of predictive expectations. The authors of these three studies agree that the distinction between desired/predictive expectations is important in extending the research of consumer satisfaction and that these results should be incorporated in future research on the subject.

In addition to the studies focussing on expectations, other researchers focus on the differences among disconfirmation, satisfaction and attitude. These studies stem from the work of Oliver (1980) who provides a substantial and simultaneous test of the relationship among expectations, disconfirmation, satisfaction and the traditional criteria of attitude and purchase intention. His findings are that a) satisfaction is an additive function of expectations and disconfirmation, b) satisfaction appears to mediate changes between preexposure and postexposure attitudinal components, and c) the satisfaction --> post-attitude --> post-intention sequence is supported. This last finding suggests that a dissatisfying product purchase

negatively influences one's attitude toward the product and subsequently, decreases one's inclination to repurchase it. Oliver's results from this two-stage field study are consistent for both consumers and nonconsumers of a flu inoculation.

Oliver's study has been replicated several times. In measuring satisfaction with automobiles and pocket calculators, Oliver and Westbrook's main findings (1982) are that satisfaction and attitude display common characteristics, while disconfirmation is a distinctly unique cognition. These researchers conclude that since satisfaction is more closely associated with evaluations, it is "heavily influenced by the evaluative tone existing before the disconfirmation experience" (p. 11). However, Oliver and Westbrook (1982) recognize that their study contains a major flaw that may have influenced the results. This flaw concerns the variance in time intervals between product purchase and questionnaire administration. Since satisfaction emotions are relatively short-lived (Oliver, 1979a), there might be some confusion about the meaning of the satisfaction measures obtained. Some respondents with more recent purchases may have been expressing feelings of satisfaction while less recent owners may have been responding in terms of attitude. Because of this limitation, definitive conclusions about the nature of the link between attitude and satisfaction cannot still be drawn.

Two other studies focus on consumer satisfaction with a new encapsulated appetite suppressant (Oliver and Bearden, 1983) and with automobile repairs and services (Bearden and Teel, 1983). The results

of the first study are that Oliver's (1980) satisfaction model is equally valid for both high and low involvement groups. The second study leads to similar conclusions. In addition, the results suggest that complaint activity may be included in CS/D research.

Another replication study is that of Moore and Shuptrine (1984). This study, which deals with satisfaction with two national non-profit voluntary health organizations, tests Oliver's model using three measurement techniques each for disconfirmation and for satisfaction. The results suggest the following:

> "The proposed theoretical scheme of Oliver's (1980) may not be a complete representation of the cognitive processes. Contrary to Oliver's posited model, disconfirmation (each method) was significantly related to post-giving attitude with each method of satisfaction. The results also suggest that expectations are significantly related to disconfirmation indicating that it is not independent of the pregiving variables" (p. 302).

One cannot explain the difference in results in terms of the measurements used since multiple measures were taken. However, it is possible that the nature of the product (a fund raising campaign) may account for some of the differences. Additional research using different types of products and services may clarify this issue.

Finally, another replication study by LaBarbera and Mazursky (1983) assessed the dynamic aspect of consumer satisfaction in consecutive purchase behavior for five commodity products. The results show that satisfaction plays a significant role in mediating intentions and actual behavior. An asymetric effect demonstrates that lagged intention affects the repurchase of a given brand whereas switching behavior is more sensitive to dissatisfaction with brand consumption.

This series of research studies indicate that Oliver's model is a step in the right direction. However, it still needs to be further validated. Research focussing on the generalisation of Oliver's model across products and services, establishing the link between satisfaction, repurchase behavior and complaint activity and clarifying the conceptual difference existing between satisfaction and attitude would be useful.

The Expectancy Disconfirmation theory appears to be the most promising approach so far to conceptualizing consumer satisfaction. The expectations-disconfirmation paradigm enjoys some support from the literature, and research demonstrates that the concepts of expectations, disconfirmation and satisfaction are measurable.

This approach offers many opportunities for further research. So far, most of the studies related to this approach involve rather static set-ups with a single product or service. There is need for research dealing with a dynamic environment and for longitudinal studies. In addition, efforts should be made to refine and validate the measurements used. Moreover, the Expectancy Disconfirmation theory could be extended to higher levels of conceptualization. The following section investigates this possibility.

Alternatives to Expectations as a Baseline.

Recently, the Expectancy Disconfirmation theory has been challenged by several researchers. The main argument used is that expectations

may not be the best baseline with which to compare perceived product performance. The reason given is that expectations-based disconfirmation measures yield only modest correlations with satisfaction measures (Woodruff, Cadotte and Jenkins, 1983a).

Social equity theory is one suggested alternative to explain the antecedents of CS/D. Swan and Mercer (1982) describe this theory in the following terms:

> "Equity is a feeling of well being or fairness or that distributive justice has occurred or a feeling of distress if the person is a victim or beneficiary of inequity. Inputs are the resources that the person invests in the relationship and outcomes are the positive and negative consequences that the participant receives. An inequitable relationship causes a feeling of distress because individuals have internalized norms that prescribe both what is equitable and how one should feel and act if inequity arises" (p. 3).

The results of an experiment dealing with airline service suggest that inequity, as evidenced by waiting time, results in consumer dissatisfaction (Fisk and Coney, 1982). Another experiment provides mixed results and only partially confirms the equity theory (Mowen and Grove, 1983). However, the role playing methodology of the study in which subjects imagine a situation limits the external validity of the study.

Another experiment compares the expectancy value theory and the equity theory relative to the prediction of satisfaction/dissatisfaction and behavioral intention (Evans, 1983). The results indicate that the expectancy value model performs better in predicting the two dependent variables. However, the measurements are questionable. The measure of consumer satisfaction, for example, is a single

like-dislike five-point scale stated as "In general, I (like/dislike) Crest toothpaste". This scale appears to measure attitude rather than satisfaction and may thus explain the results.

The previous studies are not very conclusive in demonstrating the superiority of the equity theory over the expectations disconfirmation approach. Swan and Mercer (1982) take a different approach to this situation. They believe that equity and disconfirmation theories should be integrated as they both seek to explain the same basic dependent variables. In addition, the two different processes that the theories encompass present a richer and more insightful view of satisfaction than does either alone.

Swan and Oliver (1984) explore this view in a cross-sectional study of new automobile buyers' satisfaction with their salesperson. Their findings suggest that: a) satisfaction is determined by both disconfirmation and inequity in an independent and additive fashion, b) disconfirmation is a more significant predictor than inequity, c) contrary to equity theory prediction, positive inequity (where the customer benefits more than the salesperson) increases satisfaction, and d) only extreme negative inequity results in scaled dissatisfaction. The researchers conclude that the disconfirmation model is complementary to inequity effects.

This last study seems to indicate that the equity theory can, indeed, make a contribution in explaining consumer satisfaction, if not on its own, at least in conjunction with the expectancy disconfirma-

tion approach. However, there is a need for more studies in order to insure the generalisability of the findings over a broad range of products and services. In addition, it is necessary to assess if this theory is culture-bound.

Westbrook and Reilly (1983) propose another alternative to the Expectancy Disconfirmation theory . The Value-Percept Disparity model "asserts that satisfaction is an emotional response triggered by a cognitive-evaluative process in which the perceptions of (or beliefs about) an object, action, or condition are compared to one's values (or needs, wants, desires)" (p. 258). This theory assumes that consumers are looking for the attainment of their values rather than the confirmation of their expectations. The results of a comparaison of the two models in a survey investigating students' satisfaction with their automobiles indicate that the best model integrates three variables -expectations, disconfirmation and value-percept disparity (Westbrook and Reilly, 1983). Despite some measurement problems, this study again suggests that the processes determining satisfaction may be more complex than typically assumed.

Swan and Trawick (1982) present a third alternative. Their hypothesis is that satisfaction is related to initial expectations, disconfirmation of expectations and a comparison of the service to the best alternative service. Their basic argument is that satisfaction increases with a service perceived to be superior to the best alternative and the opposite occurs with a service judged to be inferior to the best alternative. Their research, which involved patrons

of a restaurant in a real purchase situation, supports the above hypothesis. The authors' conclusion is that the best alternative is an additional variable in the satisfaction process but that it needs to be distinguished from disconfirmation in future research before being integrated in the process.

Finally, Woodruff, Cadotte and Jenkins (1983a) suggest another alternative labelled the Experience-Based Norms approach. This model proposes to replace expectations by experience-based norms as the standard for comparison of a brand's performance. In addition, the model postulates a zone of indifference as a mediator between confirmation/disconfirmation and satisfaction. The rationale for using experience-based norms instead of expectations as a baseline is that the latter limits the comparison to experiences with the focal brand only, while the former encompasses consumer experiences, not only with the focal brand, but also with competing brands of the same type of product, and even with different product types or classes depending on the situation.

These researchers have not yet tested their model but as a first step, they have developed and validated a procedure to explicate the norm's constructs which are central to their model (Cadotte, Woodruff and Jenkins, 1983). Additional studies are needed to empirically validate the model itself. If it is supported, it would greatly enrich our understanding of consumer satisfaction.

This section presented several alternatives to modeling CS/D. So far, the Expectancy Disconfirmation paradigm seems to be the most useful. However, these studies seem to indicate that the CS/D process is more complicated than originally believed. The results suggest that disconfirmation of predicted expectations is only one of the factors leading to satisfaction. Future studies should focus on exploring the different factors that act as a baseline for comparison of perceived performance. The variable "situation" should also be explored as it could be a mediating factor in the satisfaction process. Special care should be taken to ensure the use of adequate measures of expectations, disconfirmation and satisfaction. And finally, experimental studies which recreate as much as possible the conditions of the real world should be developed to test some of the proposed models.

2.3 LEVELS OF SATISFACTION

The two preceding sections dealt with the different definitions of consumer satisfaction and the models developed to explain this phenomenon. This section focusses on the scope of consumer satisfaction.

It has been argued that, to the consumer, satisfaction is a global concept embracing the many facets of the total consumption system as well as the many attributes of the product/service itself. This complexity implies that the measured satisfaction may vary depending on which level of the consumption system is the object of focus

and that further, it may change if the possible interactions with the satisfaction experienced at other levels is not accounted for (Aiello et al., 1977).

Renoux (1973) suggests that a distinction should be made between macro- and micro-marketing system dissatisfaction. The first type refers to discontent that is not associated with specific products, dealers or producers. Lundstrom's scale (1974), which measures such consumer discontent, demonstrates that consumer discontent can be measured within the economic domain. This scale consists of a series of 82 belief statements related to different aspects of business such as a) the product strategies of business, b) business communications and information, c) the impersonal nature of business and retail institutions and d), socioeconomic and political forces. The development of a scale to measure consumer discontent is useful in that it provides an instrument which discriminates between contented and discontented consumers. It may also be used to determine the variables of concern for different groups of consumers such as the elderly, women and disadvantaged consumers. Finally, it can help to monitor changes in consumer discontent over time.

Micro-marketing system dissatisfaction can be divided into three sub-areas. "Shopping-system" dissatisfaction deals with the availability of products and types of retail outlets; "buying-system" dissatisfaction deals with the problems involved in selecting and purchasing products from the retail outlets; and "consuming-system"

dissatisfaction results from problems in using goods and services (Renoux, 1973).

Czepiel, Rosenberg and Akarele (1975), using a somewhat similar framework, distinguish among three levels of consumer satisfaction. System Satisfaction is the consumers' subjective evaluation of the total benefits they receive from the operation of the marketing system. Enterprise Satisfaction refers to what consumers gain in their dealing with complex product/service organizations such as retail stores and health care facilities. It is a function of the consumption of a wide range of products and services, and their surrounding factors such as product assortment, atmosphere and location. Product/Service Satisfaction concerns the consumer's subjective evaluation of the benefits, objective and otherwise, obtained from the consumption of a specific product or service. According to Czepiel et al. (1975), these three levels of satisfaction are aggregative:

> "Enterprise Satisfaction is the summation of the individual Product/Service Satisfaction and satisfaction with the surrounding factors delivered by a firm. Similarly, System Satisfaction embraces all of the individual Product/Service Satisfactions and the Enterprise Satisfactions accumulated by the consumer. There is also interaction between these three levels. While System Satisfaction is a function of the combination of Enterprise Satisfaction, and Product/Service Satisfaction, its character simultaneously determines the other two levels of satisfaction. Product/Service Satisfaction and Enterprise Satisfaction closely affect each other as the consumer shops, purchases, and consumes" (p. 120).

The conceptualization of consumer satisfaction according to these three levels is useful in that it underlines the gaps existing in

the present literature. So far, most of the research concentrates on the Product/Service level. This research consists of cross-sectional studies focussing mainly on overall satisfaction/dissatisfaction (Ash, 1978; Day and Bodur, 1977; Handy, 1977; Schutz and Casey, 1983). Researchers also examine consumer satisfaction with one or a few products or services, focussing on the relationships existing between satisfaction and its various components and correlates (Braden, 1979; Oliver, 1977, 1979b; Swan and Trawick, 1980; Thirkell, 1980).

Very little research, however, deals with the two other levels. Only a few studies focus on satisfaction at the enterprise level. The research of Swan (1977) into consumer satisfaction with a retail store shows that satisfaction can indeed be measured at the enterprise level. Further, it indicates that the expectation paradigm is useful in explaining satisfaction at this level. Swan concludes that satisfaction relates positively to the fulfillment of expectations, the shopper's confidence in his initial expectations, the level of initial expectations and the purchase of an item during the shopping trip. Satisfaction is also directly related to postshopping attitudes, and postshopping attitudes are related to intentions to revisit the store.

Bodur and Osdiken's research (1982) is also at the enterprise level. By studying students' satisfaction with their university experience, they try to identify the factors contributing to satisfaction with educational services. At the enterprise level as well is a study

of consumer satisfaction with a public radio station (Swan and Trawick, 1983). The findings suggest that satisfaction is related to usage of alternatives, preferences for programming, listening and contributing to the radio station.

The work of Aiello (1977) and Aiello, Czepiel and Rosenberg (1977) focus on satisfaction at the three levels simultaneously. They explore the issue of scale choice in consumer satisfaction in the context of a survey on trading stamps, with one of their research objectives being the validation of the three levels (system, enterprise, product) conceptualization of consumer satisfaction. Based on the multi-trait, multi-method approach, the results indicate convergent validity but not divergent validity. The authors question, therefore, whether the distinction between system, enterprise and product level satisfaction can be made. However, Aiello (1977) recognizes that the methodology used may have been at fault. The multi-trait, multi-method approach assumes independent levels, while the theory conceptualizes the three levels as dependent and aggregative.

So far, the literature neglects the system satisfaction level and the extent to which this level contributes to the understanding of consumer satisfaction. The concept of "system satisfaction" as defined by Czepiel et al. (1975) is quite similar to the "macrosystem dissatisfaction" concept of Renoux (1973). Both concepts consider the consumption of all goods and services as a whole. But this level of conceptualization is very broad. For policyma-

kers, it does not permit the diagnosis of the specific causes of consumer dissatisfaction, nor does it facilitate the determination of priorities for developing consumer protection programs. Furthermore, it is possible that at least from the consumer's viewpoint, this level of conceptualization means very little. Consumers are generally more interested in what they can get from specific sectors of the marketing system, than in the marketing system itself. Studies show that most consumers are satisfied with a lot of products and services, and that dissatisfaction is concentrated mostly in a few sectors of the marketing system. Therefore, a more useful level for studying satisfaction may be at the sub-system level. For example, specific products or services are usually purchased and consumed within specific contexts. Dishwashing machines are sold in certain types of retail outlets, and must be serviced at certain outlets specified by the store/dealer or manufacturer, at least during the warranty period. The study of satisfaction at the sub-system level retains the richness of the "system" concept while providing a more specific perspective for diagnosis and evaluation purposes.

2.4 CONSUMER SATISFACTION AS A PROCESS

So far, the discussion portrays consumer satisfaction in a static fashion. The preceding sections focussed on the definitions of this construct, the models developed to explain it and finally, the different levels or perspectives adopted to study this phenomenon. However, we have missed an essential aspect of it, its dyna-

mism. This section looks at consumer satisfaction as a process. It focusses on the relationships between satisfaction and the various components of the consumer's experience.

Day (1977a, 1977b) is the first researcher to present a process model of consumer satisfaction. His basic framework is the familiar expectations disconfirmation paradigm to which he adds that expectations, purchase and use behavior, and postpurchase evaluations are stages in a continuous process. According to Day:

> "A process model provides a framework for relating prepurchase expectations, situational variables, and social variables to the consumption and evaluation process over time and under changing environmental and situational conditions. This perspective suggests the need to recognize that the process differs for different kinds of products, different circumstances of use for given products, and for consumers with different backgrounds and needs" (1977b, p. 154).

The first stage in Day's model consists of the formation of expectations. Expectations develop, based on the consumer's previous experience which, among other things, contribute to the recognition of the product's salient attributes, and to some assessment of their importance to the consumer. In addition, various personality and situational factors may affect both the consumer's expectations and reactions to the confirmation or disconfirmation of these expectations in the consumption experience. The expected monetary costs associated with the product can have an important effect on the postpurchase evaluation as well as on choice behavior. For instance, price is sometimes interpreted as an index of quality, thus influencing the level of expectations. Similarly, price may serve as an index of the importance of the purchase. It may influence prepurcha-

se information seeking and shopping behavior and thus, affect the nature and extent of expectations.

The second stage consists of the purchase and use of the product which may vary according to the degree of complexity of the product. Day suggests that in this second stage, the consumer goes through a process of evaluating the extent to which the actual performance of the item in the consumption experience meets or exceeds a priori expectations. This evaluative process might follow three different models (Day, 1977b, p. 150):

> Lexicographic model. A single attribute is used as the basis of evaluation. Confirmation or disconfirmation of expectations on this attribute leads to satisfaction or dissatisfaction with the product or service. If the consumer's evaluation of the major attribute is inconclusive, the next most important attribute might be considered in turn until some basis of evaluation is reached.
>
> Disjunctive model. Several attributes of the product or service are evaluated against expectations. Satisfaction occurs if expectations are confirmed for all salient attributes, and dissatisfaction results if expectations are disconfirmed on any attribute.
>
> Compensatory model. Several salient attributes of the product or service are evaluated against expectations. Overall satisfaction occurs even when expectations are disconfirmed on some of the attributes, provided that expectations are met or exceeded on a sufficient number of attributes to compensate for the unsatisfactory attributes.

Day believes that the compensatory model is probably the most realistic one, but that much remains to be learned about the consumer's evaluative process. He also suggests that this evaluative process is not always done consciously by consumers. In order for it to

occur, it must be initiated by triggering cues at some point in time. Two other sets of factors are also assumed to complicate the evaluative process. Situational factors encompass prepurchase circumstances and marketing practices such as advertising, in-store displays and sales presentation, out-of-stock situations, problems of delivery, warranty, credit and collection. Individual factors include the depth of experience as a consumer, the degree of personal involvement in consumption experiences, and the propensity to be critical.

The third stage in Day's model consists of the post-evaluation behavior that follows the feelings of satisfaction, dissatisfaction or indifference. These behavioral outcomes may be of three kinds: (1) do nothing at all, (2) take some "private action" by modifying one's own behavior or seeking to influence the behavior of family and friends, and (3) take some "public action" such as contacting business firms, consumer organizations, or governmental agencies.

The major contribution of Day's model is that it provides the basis for developing testable hypotheses for future research. The rest of this chapter discusses the findings of some of the research based on this model.

Swan and Trawick (1979a, 1979b) while investigating the effect on consumer satisfaction of some of the situational factors, also tested Day's hypothesis that an evaluative response is more likely to occur if triggering cues are present. The results indicate that while

conscious evaluation of consumer products and services does not always occur, certain triggering cues may increase the likelihood of an evaluation.

The examination of pre-decisional search by several researchers has produced mixed results. Many scholars find that search is positively related to product satisfaction (Anderson, Engledow and Becker, 1979; Cardozo, 1965; Cox, Granbois and Summers, 1983). Furthermore, the impact of search varies by product category (Westbrook, 1980a). For purchasers of new automobiles, there is an inverted-U fashion relationship between search and satisfaction: increased search improves subsequent satisfaction with the purchase only up to a point, beyond which diminishing satisfaction sets in. For footwear items, search is related to satisfaction only in connection with the disconfirmation of expectations relative to positive product outcomes. If the items provide benefits that are not as good as, or just meet consumer expectations, higher levels of search yield lower levels of satisfaction. Westbrook explains these conflicting results by the potentially different roles played by search for these two products. In the case of cars, Westbrook feels that search might represent to the consumer an attempt to make the best possible choice; for footwear items, search might be a necessary evil, useful only to locate a product that meets the buyer's predetermined needs and desires.

The studies mentioned above conceptualize search as a global concept; they do not differentiate between the different sources of infor-

mation. This factor might also account for the mixed results obtained. Andreasen (1968) suggests that sources of information should be divided into five categories which he operationally defines as follows:

> Impersonal Advocate (IA): mass media advertising including magazine ads, listening to radio commercials, reading newspapers ads, viewing TV commercials, or looking at point-of-purchase displays.
>
> Impersonal Independent (II): checking with Consumer Reports or finding a technical report on the product.
>
> Personal Advocate (PA): asking a sales clerk's or stores-manager's opinion.
>
> Personal Independent (PI): trying to remember what brand a friend or neighbour uses, asking opinions of family members or close friends, asking the opinion of a neighbour or co-worker.
>
> Direct Observation/Experience (OE): asking for a product demonstration, relying on past experience, trying the product before buying, or reading the information on the package.

Thirkell (1980) uses a similar classification for information search, with two modifications. First, instead of using five different sources of information, he combines the PA and OE sources into a single category. Second, his four major search constructs include a single measure of variety and intensity (depth) respectively within each. Thirkell's results show that there is a strong negative relationship between expectations and impersonal independent sources of information (both in terms of variety and depth of use) and, to a lesser extent, between expectations and the variety of personal advocate sources used, at least for recent purchases of cars. Moreover, disconfirmation is negatively related to impersonal advocate sources, both in terms of variety and depth of use. His results

highlight the need to separate the types of search being undertaken when evaluating overall prepurchase search effects upon consumer expectations formation.

Besides situational factors, researchers also investigate the relationships between satisfaction and the previous experience of consumers. Often they obtain mixed results. Anderson, Engledow and Becker (1979) for instance, report that experience is negatively related to search and positively related to product satisfaction. Westbrook (1977) shows a curvilinear relationship between prior experience and satisfaction with major household appliances. The results indicate that higher satisfaction is associated with intermediate levels of experience (operationally defined in this study as the number of types of appliances previously owned). Thirkell (1980) reports no significant relationship between previous experience and both level of expectations and disconfirmation related to recent purchase of a car. However, this last result may be attributed in part to the measures of experience used in this study. Finally, the results of a study (Nolan and Swan, 1984) measuring consumer satisfaction with a restaurant suggest that expectations are constant across respondents with different levels of usage on most attributes. However, for some attributes, the results show an increase in expectations with experience (as compared to no experience) followed by declining expectations with usage. These findings indicate a need for additional research on previous experience, both in the measurement of this concept and in relation to the various components of the consumer experience.

Two studies provide information on the effect of time/usage experience (time of ownership) on some of the components of the satisfaction process, in the context of automobile purchases. Kennedy and Thirkell (1982) note an inverse relationship between expectation disconfirmation and time since purchase. The strength and exact form of the relationship, however, varies depending on the type of attributes considered. Ortinau (1982) also indicates a curvilinear relationship between purchasers' actual satisfaction attitudes and time of ownership. These findings provide empirical support to some theorists' speculations that the time element associated with consumers' product usage experience is a salient factor of consideration when studying the concept of consumer satisfaction. However, since the studies both deal with automobiles, there is a need to validate this relationship across a broad range of products and services.

In addition to the impact of past experience upon subsequent levels of satisfaction, there is tentative evidence suggesting that consumer satisfaction will be affected by a number of other consumer behaviors and characteristics: personality traits, perceived risk, specific self-confidence, generalized beliefs about the market system and demographic characteristics (Thirkell,1980). However, the precise nature of the links between these constructs remains open to further empirical determination.

Westbrook (1977a, 1977b) indicates a relationship between satisfaction and basic personality structure such as personal competence

and efficacy. Similarly, Thirkell (1980) suggests that specific self-confidence has a positive impact both on level of expectations and on disconfirmation. The results of another study (Anderson, Engledow and Becker, 1979) demonstrate a positive relationship between attitudes toward business and product satisfaction. Thirkell (1980) also reports that generalized market beliefs do not have any significant impact on level of expectations, while they appear to be negatively correlated to disconfirmation of expectations.

Thirkell (1980) also presents results which show no significant relationship between perceived risk and expectations and disconfirmation. However, this finding may be explained by the measure of perceived risk used in the study. Thirkell uses a definition of risk similar to one developed by Dash, Schiffman and Berenson (1976). Both studies operationalize risk as a combination of two components: the certainty that a particular choice of a product would prove to be satisfactory, and the seriousness to the consumer if the product proved to give unsatisfactory performance. This definition is in accord with what has been called in the literature, the global approach. This approach conceptualizes perceived risk as a two-component construct: a probability/uncertainty, and a consequence/danger/importance dimension (Bauer, 1960; Cox, 1967; Cunningham, 1967b; Dash, Schiffman and Berenson, 1976; Hisrich, Dornoff and Kernan, 1972; Zikmund and Scott, 1974). "Consumer behavior involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which at least are likely to be unpleasant"

(Bauer, 1960). The relationship between these two components of perceived risk is not clear. Most researchers assume it is multiplicative, but Bettman (1972) suggests that it may be additive.

The global approach to risk has not attained general acceptance, because it cannot satisfactorily explain the different risk relievers used by consumers. A second approach, however, is the "risk-component approach" (also labelled "types of perceived risk"). This view identifies and measures several basic and independent dimensions of overall perceived risk (Jacoby and Kaplan, 1972; Kumpf, 1977; Peter and Tarpey, 1975; Roselius, 1971; Zikmund and Scott, 1973). It does not necessarily reject the uncertainty and consequence/loss components of perceived risk but rather focusses on the multidimensional character of risk. The studies adopting this view attempt to predict overall perceived risk by combining several functionally independent varieties of risk. Jacoby and Kaplan (1972) conclude that five components (financial, performance, physical, psychological and social) can predict overall perceived risk fairly accurately. These components predict 74% of the variance in the criterion variable. Jacoby and Kaplan also note that time risk, a type of risk suggested by Roselius (1971), probably should have been included in their research.

This controversy about the nature of perceived risk provides an opportunity for additional research. More specifically, there is a need for studies investigating the nature of the relationship

between perceived risk and information-seeking in relation to consumer satisfaction, expectations and disconfirmation.

Finally, some studies focus on the demographic correlates of consumer satisfaction. Westbrook (1977a) indicates that none of the demographic variables, except occupation, is especially useful for categorizing respondents in terms of dissatisfaction. Other studies provide similar results, or at best, give indications that the impact of demographic characteristics varies across product categories. However, at least one demographic variable, gender, deserves special attention.

At least four studies use gender as a correlate of consumer satisfaction or complaining behavior. The first study consists of a survey seeking responses on problem incidence, cognitive and normative expectations, and complaining behavior in relation to grocery products, shoes and clothing items (Granbois, Summers and Frazier, 1977). The results indicate that women have a tendency to report higher problem incidence than men. The researchers attribute this difference not to gender but to a difference in shopping experience.

Swan (1977) in an investigation of satisfaction with a shopping trip finds higher satisfaction among women than men. He explains this result by pointing out that the department store was designed more for women than for men. Therefore, he concludes that fit with the market segment of the store is an important factor contributing to consumer satisfaction.

Duhaime and Ash (1980) in a national survey of consumer satisfaction with products traditionally bought mainly by males report the following findings. Firstly, men are less satisfied than women as purchasers both of cars and other transportation products, and of financial services and insurances. Westbrook (1977b) finds similar results for major household appliances. Secondly, women are more likely than men, at least for some products and services, to take some direct form of action in order to resolve their dissatisfaction. Due to the nature of the study, Duhaime and Ash do not suggest any explanations for their findings. Their research focusses on the level of satisfaction experienced by consumers, and the subsequent complaining behaviors adopted. It does not investigate the factors contributing to the level of satisfaction. These two authors therefore concluded that further research is necessary to understand the apparent differences in postpurchase responses associated with each segment.

Finally, Thirkell's (1980) study also indicates differences due to gender. His results reveal that women have consistently higher levels of global expectations than men with respect to cars. Furthermore, the findings show that disconfirmation varies significantly for men and women. Thirkell does not try to explain the gender differences he finds in his study. Are they due to different shopping/buying/usage experiences, or to a lack of familiarity with a product traditionally bought by male consumers, or to different treatments received in the marketplace, or to differences in scale perceptions?

These unanswered questions indicate that gender differences related to consumer satisfaction is an area worth investigating especially since women constitute half of the population. Moreover, an increasing number of women now buy products traditionally reserved to men such as motorcycles, electric razors, electric tools -jig saws, sanders and drills. To what extent are marketers responding to women's needs in relation to these products? The measurement of consumer satisfaction might constitute a useful means of assessing their success in the marketplace.

At the seventh CS/D & CB conference, Day (1983) presented an updated version of his process model, which incorporated the latest findings made by researchers in the satisfaction field. This revised model is by and large similar to the older version. One addition is the incorporation of product class norms for performance, social impact and total cost which are based on consumer prior knowledge and experience with the product class. The model assumes that these norms interact with perceptions of actual performance to produce a confirmation or disconfirmation of expectations/norms. A second addition to the model is the inclusion of two prepurchase variables, product class affect and brand affect which are assumed to influence respectively the post evaluation product class affect and the post evaluation brand affect. And finally, the post evaluation stage of the model encompasses five different kinds of responses: behavioral responses, purchase intentions brand, purchase intentions product class, post evaluation product class affect and post evaluation brand affect.

In this revised model, Day sees the decision to complain (and what actions to take) or not to complain as a problem solving process. He describes this process in the following terms:

> "The dissatisfied consumer surveys the situation and a) assesses the nature and extent of inequities or injuries which led to her/his feelings of dissatisfaction, b) identifies which, if any of [several] alternatives are feasible, c) identifies the responsible party, d) estimates the economic and psychological costs and benefits of successfully pursuing each alternative remaining in the feasible set, e) assesses her/his subjective probability of achieving the desired redress or other goal of each alternative action being considered, f) computes the expected value of each alternative, g) for each alternative under consideration, a judgment is made of whether or not it should be implemented, h) carries out the chosen alternative(s), i) evaluates the success of chosen alternative(s), and j) evaluates the experience and updates feelings of satisfaction/dissatisfaction/brand affect, and intentions to buy" (p. 115).

Research is needed to test this comprehensive model. This research should concentrate on refining and measuring the constructs proposed by Day. It should also verify if Day's model is applicable to low as well as to high involvement products or services. These research directions are compatible with those proposed by Woodruff, Cadotte and Jenkins (1983b). These researchers view the CS/D research as being in the maturity stage of development, and they identify three major research priorities for the future. These priorities are 1) research on measurement reliability/validity, 2) research into conceptual relationships, but in the context of theory testing, and 3) research testing entire models/theory. Given the present state of the art of the CS/D field of study, one cannot but agree with these priorities.

Conclusion: This chapter reviewed the major empirical and experimental studies performed in the area of consumer satisfaction and presented several definitions of this concept. It also developed three approaches designed to explain satisfaction and discussed the different levels one can adopt to study the area. Evidence was presented to support the view that consumer satisfaction is a process. Furthermore, an attempt was made to identify some of the gaps in the literature and the need for further research. The next chapter proposes an integrative model of consumer satisfaction at the sub-system level.

CHAPTER III

RESEARCH MODEL AND HYPOTHESES

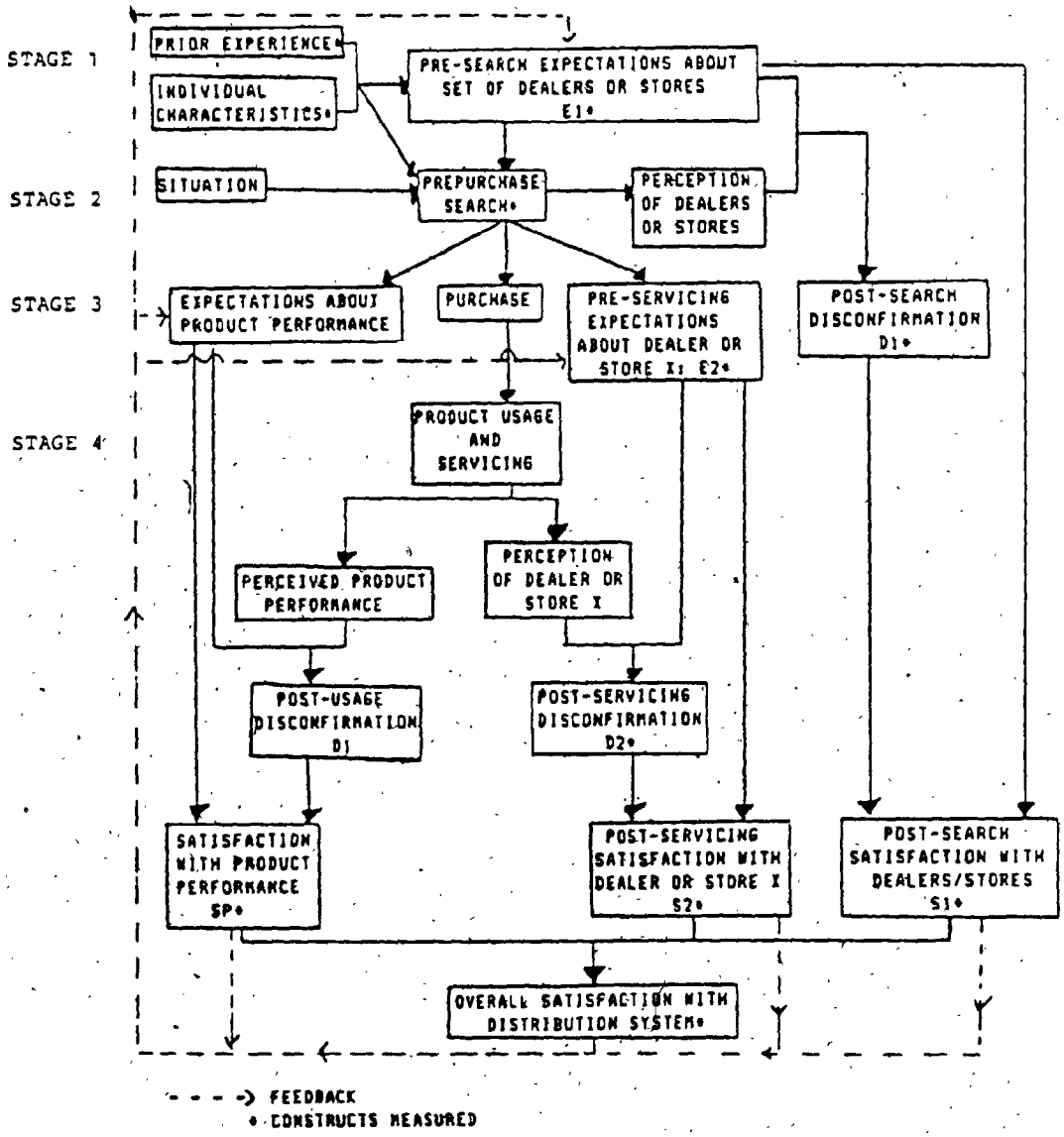
This chapter presents a conceptual model of consumer satisfaction at the sub-system level. In this study, the sub-system investigated is the distribution system for a durable product. The distribution system is defined as the set of stores and/or dealers selling a particular product category to consumers. It thus includes the specific store or dealer where the product is purchased and where the product is repaired and serviced during the warranty period, and during the duration of the service contract (or extended warranty contract), if one is included in the transaction. If product servicing is not the responsibility of the store or dealer but that of the manufacturer, then the distribution system for the product also includes the outlet where the product is to be repaired or serviced. This definition of a distribution system is suitable mainly for durable products. This chapter also defines and operationalizes the variables used in this study, describes the interrelationships among the variables and presents the set of formal hypotheses to be tested.

3.1 THE RESEARCH MODEL

As Figure 3.1 illustrates, the model presented in this section views consumer satisfaction with the distribution system of a product as the result of a process comprising four stages. The first stage

FIGURE 3.1

PROCESS MODEL OF CONSUMER SATISFACTION WITH THE DISTRIBUTION SYSTEM OF A DURABLE PRODUCT



consists of the formation of pre-search expectations about the set of stores/dealers selling the product. The consumer's prior experience as a purchaser/owner of the product influences these expectations. Prior experience includes a) the number of products previously owned by the consumer, b) the consumer's satisfaction with the last product owned and with the store/dealer which serviced that product, and finally c) the consumer's knowledge of similar products available in the market as well as of their maintenance and repair. The individual characteristics of the consumer: demographics (gender, income, age), generalised market beliefs, perceived risk and specific self-confidence also influence pre-search expectations.

The second stage of the model consists of the prepurchase search made by the consumer. The variety and extent of this search can vary depending on the individual characteristics and the prior experience of the consumer as well as on the situation surrounding the purchase of the product. These situational characteristics include:

- the reason for buying the product such as first time purchase, addition, gift or replacement of the old product.
- the precipitant/catalyst that acts as a triggering cue and motivates the consumer to start searching now. Examples include introduction of new models on the market, failure of the old product, a new job or a salary increase.
- the urgency of the need for the product.
- the amount of time since the last purchase.

The consumer's pre-search expectations also influence the prepurchase search. For example, expectations about the credibility of salespeople as a source of information might induce the consumer to rely

more on visits to stores or dealers when making the decision to buy.

During the prepurchase search, the consumer undertakes several activities which involve the utilization of different sources of information. One of these activities consists of visiting different dealers or stores which offer the product wanted by the consumer. These interactions between consumers and retailers can be different for each consumer. Furthermore, consumers tend to perceive them in their own way. Therefore, it is the perception of the stores or dealers visited that the consumer compares with his pre-search expectations. If the perceived interactions exceed the initial expectations, there is a positive disconfirmation. If the perceived interactions are equal to the expectations, the consumer experiences confirmation. And if the perceived interactions are below the consumer expectations, there is negative disconfirmation. The result of this comparison process is, respectively, consumer satisfaction, indifference or dissatisfaction with the set of stores/dealers visited.

This comparison process does not occur systematically. The possibility of this process occurring increases if something triggers it. Triggering cues include any aspect of the purchase or usage of a product that breaks the routine and calls attention to the experience. Swan and Trawick (1979) mention that triggering cues thus heighten user sensitivity to the purchase/consumption process and increase the likelihood that a product or experience would be evalua-

ted.

The third stage consists of the purchase of the product. Since purchasing a product implies choosing a specific store or dealer, the third stage also includes the "purchase" (choice) of a store or dealer with all the attendant services. For instance, many retail stores offer services such as product financing, gift wrapping, an extended warranty or servicing plan, expert advice, and delivery. The price of the product often includes these services which may vary in quantity and quality depending on the store. Very often, the retailer is also responsible for honouring the warranty offered by the manufacturer. Honouring the warranty often implies replacing or repairing the product, or reimbursing the customer. Therefore, at least for durable or semi-durable products, purchasing a product also means a more or less long term relationship with a specific store or dealer.

Together with the product purchase, the consumer forms some expectations about the product performance, and about the store or dealer where the product is bought. These expectations are the consequence of the prepurchase search, the individual characteristics and the prior experience of the consumer. In addition, pre-servicing expectations are also the result of the consumer satisfaction with the set of stores or dealers visited during the prepurchase search.

Finally, the fourth stage consists of the product usage and servicing. As mentioned previously, products consumed in a short period

of time do not require any servicing. Thus, this model is suitable mainly for durable or semi-durable products that demand periodic maintenance or servicing by specialists or that involve a warranty period during which the product may be repaired, if necessary.

During this fourth stage, product consumption occurs. If stimulated by triggering cues, the consumer engages in a process of comparing product performance perception with pre-usage expectations. The result of this comparison process may be disconfirmation (positive or negative) of the expectations, and consequently, feelings of satisfaction or dissatisfaction with the product. Comparison may also result in product performance perceptions equal to expectations and consequently feelings of indifference.

Similarly, during the fourth stage, the consumer interacts with the specific store or dealer servicing the product. Again, a comparison can take place between the perceived interaction(s) with the store/dealer and the consumer pre-servicing expectations. The result of this comparison process may be disconfirmation (positive, or negative), and consequently, feelings of satisfaction or dissatisfaction with the store or dealer. As in the case of product performance, comparison may also produce feelings of indifference if the store/dealer is equal to pre-servicing expectations.

The final result of this four-stage process is an overall feeling of satisfaction with the distribution system of the product purchased. Three components influence this overall satisfaction: a) post-

search satisfaction with the set of dealers/stores offering the product, b) post-servicing satisfaction with the specific dealer/store where the product was purchased, and c) consumer satisfaction with the product performance. Finally, as the feedback loops indicate, overall consumer satisfaction with the distribution system, as well as consumer satisfaction with each one of the three components impact on the expectations held by the consumers in the future, and thus become part of the consumer experience.

This study does not investigate the relationships among all the constructs presented in Figure 3.1. Instead, it concentrates on the most important variables. These variables are identified with an asterisk. The factors influencing consumer satisfaction with product performance are not investigated in this study since they have been investigated in the past, especially by Thirkell (1980). Similarly, the factors influencing prepurchase search are not examined since they have also been investigated by several researchers. Therefore, prepurchase search and satisfaction with product performance are treated as independent variables in this study. The remainder of this section outlines the relationships that will be investigated in this study.

The conceptual model suggests that satisfaction with the distribution system is a function of a) consumer post-search satisfaction with the stores or dealers selling the product, b) consumer post-servicing satisfaction with the store or dealer where the product is serviced, and c) consumer satisfaction with the product itself.

This set of relationships can be expressed in the following mathematical form for any given consumer:

$$OSj = f\ (S1k,\ S21,\ SPm)$$

where (for consumer "i"):

OSj = Overall satisfaction with distribution system j of a product.
S1k = Satisfaction with the set of stores/dealers k selling the product.
S21 = Satisfaction with the store/dealer 1 where the product is bought.
SPm = Satisfaction with the product performance m.

Then, adopting the Expectancy Disconfirmation approach, post-search satisfaction with the stores/dealers selling the product is a function of both pre-search expectations and the degree of confirmation or disconfirmation of these expectations during the perceived interactions with stores/dealers resulting from the prepurchase search. More formally, this relationship is as follows:

$$S1k = f\ (E1n,\ D1n)$$

where (for consumer "i"):

S1k = Satisfaction with the set of stores/dealers k selling the product.
E1n = Pre-search expectations of criterion n.
D1n = Post-search disconfirmation on criterion n.

Similarly, post-servicing satisfaction with the store/dealer where the product was bought is a function of both pre-servicing expectations and the degree of confirmation or disconfirmation of these expectations during the perceived interactions with the store/dealer following the product purchase. A formal statement of this relationship follows:

$$S21 = f\ (E2o,\ D2o)$$

where (for consumer "i"):

S21 = Satisfaction with the store/dealer 1 where the product is bought.
E2o = Pre-servicing expectations of criterion o.
D2o = Post-servicing disconfirmation on criterion o.

The model also suggests that pre-search expectations and post-search disconfirmation are a function of individual characteristics and prior experience. In addition, post-search disconfirmation is a function of the prepurchase search. Formal statements of these relationships are:

$$E1n = f(ICq, PEr)$$
$$D1n = f(ICq, PEr, SAp)$$

where (for consumer "i"):

E1n = Pre-search expectations of criterion n.
D1n = Post-search disconfirmation on criterion n.
ICq = Individual characteristics of criterion q.
PEr = Prior experience on criterion r.
SAp = Search activities performed using source p.

Finally, pre-servicing expectations and post-servicing disconfirmation are a function of individual characteristics, prior experience and the prepurchase search. Formally stated these relationships are:

$$E2o = f(ICq, PEr, SAp)$$
$$D2o = f(ICq, PEr, SAp)$$

where (for consumer "i"):

E2o = Pre-servicing expectations of criterion o.
D2o = Post-servicing disconfirmation on criterion o.
ICq = Individual characteristics of criterion q.
PEr = Prior experience on criterion r.
SAp = Search activities performed using source p.

The rest of this chapter defines the selected constructs and describes their interrelationships. Subsequently, each variable is opera-

tionalised and the major hypotheses of the study are described.

3.2 DEPENDENT AND INTERVENING VARIABLES

Given that this study investigates a process model of consumer satisfaction only one variable, overall satisfaction with the distribution system, is viewed as a dependent variable. Six other variables act as intervening variables. They consist of pre-search and pre-servicing expectations, post-search and post-servicing disconfirmation, and post-search and post-servicing satisfaction.

Expectations: There is considerable support in the literature for the multidimensionality of the expectations construct. Therefore, this study defines pre-search expectations as a set of beliefs about the group of stores or dealers offering a particular product to consumers. Similarly, for this study pre-servicing expectations are defined as a set of beliefs about the store/dealer where the product is purchased. These two sets of beliefs are related to the benefits and costs associated with the interactions between consumers and their stores or dealers occasioned by the consumer shopping/buying/using of a specific product over time. The following section, section 3.3, operationally defines these two sets of expectations.

Disconfirmation: This construct is generally defined as the extent to which a consumer's perceptions of an object or experience exceed, meet, or fall short of prior expectations. Accordingly, positive

disconfirmation occurs when, for the consumer, perceptions exceed expectations. If perceptions just equal expectations, confirmation is the result. Finally, if perceptions are less than expectations, negative disconfirmation results. This definition of disconfirmation emphasizes the relative nature of this construct since it is the result of a comparison process with expectations serving as the basis of comparison.

Consequently, for the purposes of this study, post-search disconfirmation is the result of a comparison between pre-search expectations and the consumer's perception of the stores or dealers visited during the search. Similarly, post-servicing disconfirmation is the result of a comparison between pre-servicing expectations and the consumer's perceptions of the store/dealer where the product was purchased.

As indicated earlier, there are several models of disconfirmation (Day, 1977a, 1977b). So far, however, the weight of the empirical evidence is in favour of the compensatory model (Thirkell, 1980). Consequently, this research uses this model. The compensatory model assumes that a product can exhibit both positive and negative disconfirmation, such that performance falling short of expectations on some attributes is offset totally or in part by performance exceeding expectations on other attributes. Section 3.3 presents the operationalisation of this model of disconfirmation as applied to the distribution system of new automobiles.

Satisfaction: Satisfaction is, in essence, an emotional response

manifested in the feelings which follow an experience with a product, a service, an enterprise or a set of enterprises. It is thus seen in this study as a single global measure. Consequently, post-search satisfaction consists of an evaluation made by the consumer as to whether the experience of visiting dealers or stores was favourable, indifferent, or unfavourable. Similarly, post-servicing satisfaction consists of the consumer's evaluation as to whether the experience of interacting with the specific store/dealer where the product was bought is favourable, indifferent, or unfavourable.

To be consistent with the other intervening variable definitions, a set of submeasures corresponding to the expectations previously defined are taken. These submeasures help to determine the specific causes of satisfaction or dissatisfaction to consumers. They also form the global measures of post-search and post-servicing satisfaction.

Finally, overall satisfaction with the distribution system of a product is defined as the consumer's overall feeling toward the set of stores or dealers selling the product. Compared to the definition of system satisfaction developed by Czepiel et al. (1975), this definition is different in that it applies to a sub-system of the marketing system.

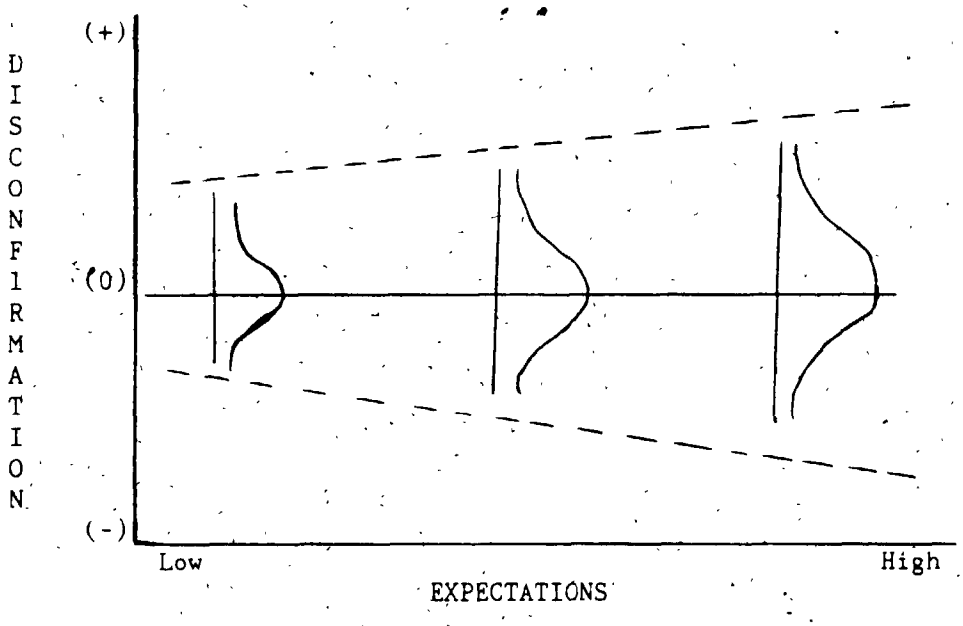
Interrelationships: This section describes the relationships among the variables defined above. So far, the bulk of the evidence points towards the independence of expectation and disconfirmation levels

(Oliver, 1977a, 1980; Thirkell, 1980). This finding means that even if disconfirmation implicitly includes consumer evaluations of the object or experience, it is not directly associated with the prior level of expectations held by consumers. However, there is evidence of a systematic relationship between the level of expectations and the "magnitude" of absolute disconfirmation which occurs (Thirkell, 1980). Figure 3.2 illustrates the form of the relationship between these two constructs. In other words, the distribution of disconfirmation is symmetric at differing levels of expectations while, at the same time, there is a steadily increasing magnitude of disconfirmation with higher expectations. Thirkell's finding is consistent with the notion of "zones of indifference" or "tolerance regions" discussed by several researchers. It seems that people with higher expectations have larger zones of indifference than others. This study assumes that the relationship described above holds both between pre-search expectations and post-search disconfirmation, and between pre-servicing expectations and post-servicing disconfirmation.

The second area for investigation is the relationship between satisfaction and expectations. Several studies demonstrate that consumers with higher expectations are "per se" more satisfied. Thirkell (1980) further demonstrates that levels of dissatisfaction are also positively related to levels of expectations, at least for certain products such as new cars. It seems, therefore, that among consumers with higher levels of expectations, there are more extreme feelings of satisfaction or dissatisfaction. The form of the relationship

FIGURE 3.2

RELATIONSHIP BETWEEN EXPECTATIONS AND DISCONFIRMATION



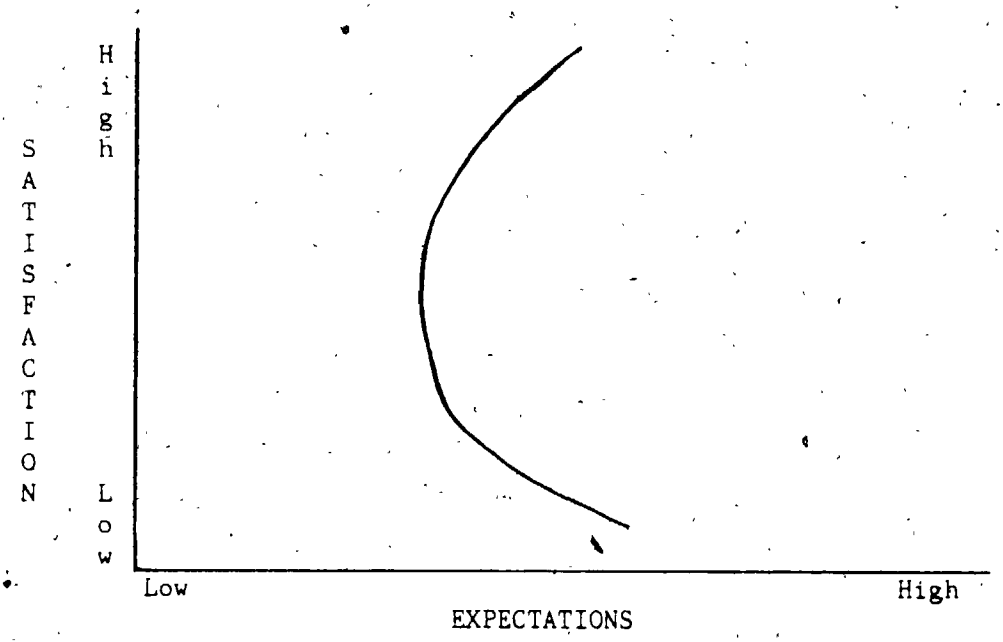
between expectations and satisfaction would thus be curvilinear, as illustrated in Figure 3.3. This relationship should be present both between pre-search expectations and post-search satisfaction, and between pre-servicing expectations and post-servicing satisfaction.

Another group of researchers (Anderson, 1973; Olshavsky and Miller, 1972) focusses on a third relationship, that between perceived performance and expectations. They report a direct relationship between these two constructs.

To complete this set of interrelationships, it is necessary to introduce again, a concept that improves the understanding of the diffe-

FIGURE 3.3

RELATIONSHIP BETWEEN EXPECTATIONS AND SATISFACTION



rent links among these four constructs. Several researchers discuss the notion of "zones of indifference" or "tolerance regions" (Anderson, 1973; Day, 1977a; Oliver, 1977). Thirkell's summary (1980) illustrates the hypothesised moderating effect of such zones on satisfaction/dissatisfaction:

> "When this "zone of indifference" varies as a direct function of the level of expectations, then equal levels of disconfirmation but higher levels of satisfaction occur concurrently with higher levels of expectations" (p. 49).

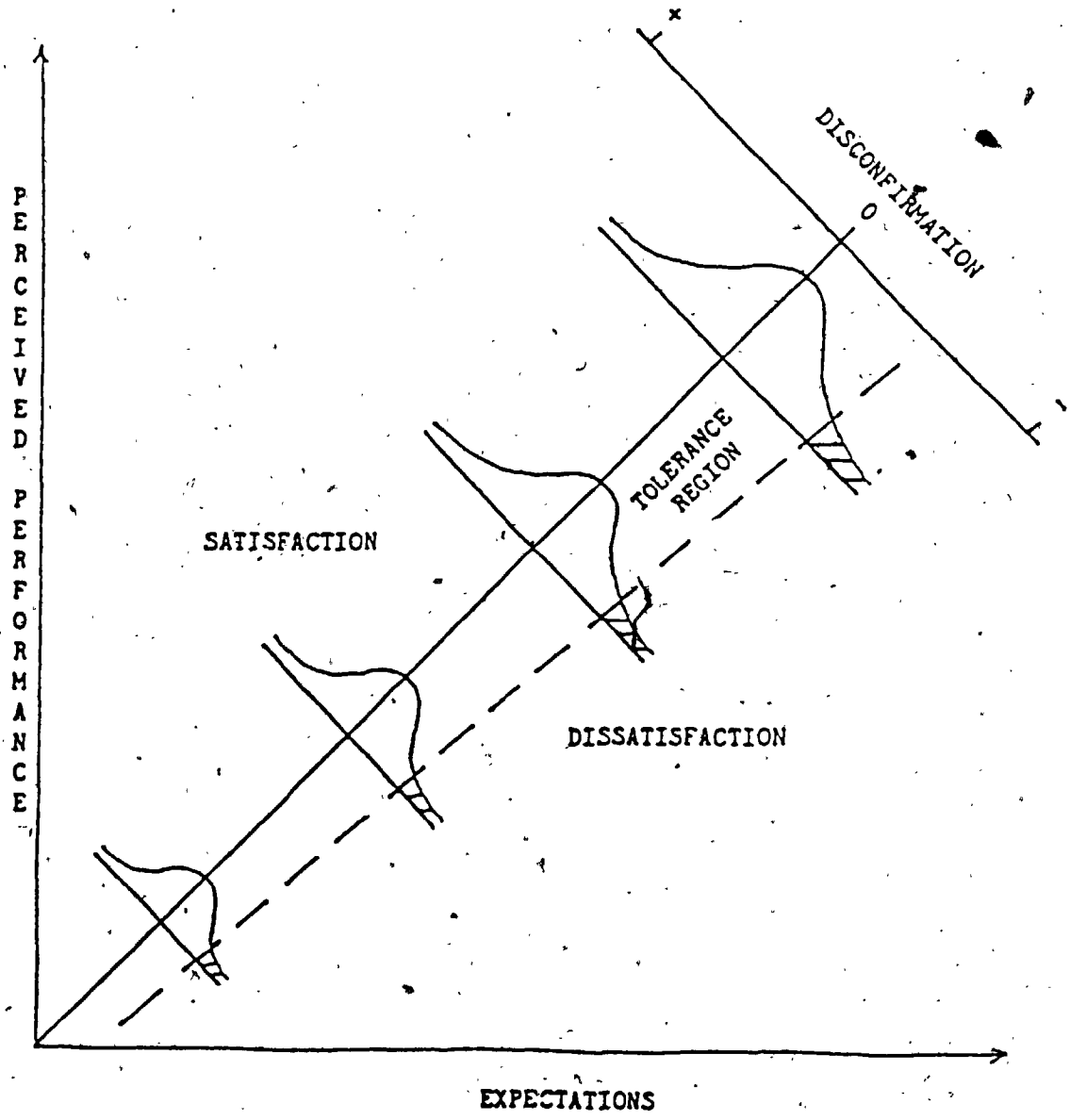
Thirkell is the only researcher to empirically test this hypothesis. He reports, however, that this hypothesised relationship is not completely supported by his data. Whether or not dissatisfaction results, indeed depends upon the consumer's tolerance regions, but only where perceived performance falls short of expectations. If

prior expectations are sufficiently unfulfilled to fall outside this tolerance region, then dissatisfaction results. Thirkell thus concludes in favour of a "contrast" effect, modified by the existence of tolerance regions.

Figure 3.4 summarizes the hypothesised interrelationships among the three major intervening variables (expectations, disconffrmation and satisfaction) and a fourth construct, perceived performance, not measured in this particular study. This figure should be interpreted in the following way. The 45 degree line between expectations and perceived performance represents the relationship between these two constructs, all other things being equal. The distributions overlaid upon this line symbolize the independence of the mean disconfirmation levels and consumer expectations. They also illustrate the increases in the magnitude of disconfirmation over the expectation range. The zone above the 45 degree line represents the satisfaction which is felt when perceived performance exceeds prior expectations. It also shows that the magnitude of felt satisfaction increases directly with the level of prior expectations held. In the dissatisfaction zone, the one below the 45 degree line, a similar but opposite phenomenon happens. If prior expectations are sufficiently unfulfilled as to fall outside the consumer's tolerance region (the zone between the 45 degree and the dotted lines), then dissatisfaction results in direct relationship to the level of expectations held. The underlying assumption of this figure is that these interrelationships exist for the two comparison processes described in this section.

FIGURE 3.4

DEPENDENT VARIABLE INTERRELATIONSHIPS



Source: P.C. Thirkell, "Consumer Expectations, Disconfirmation and Satisfaction", Unpublished Doctoral Dissertation, School of Business and Administration, University of Western Ontario (1980).

Finally, another set of relationships deserves attention. As discussed in Chapter II, Czepiel et al. (1975) conceptualize three levels of consumer satisfaction: the system level, the enterprise level, and the product/service level. The present study takes a more focussed view and deals with consumer satisfaction at the sub-system level. While Czepiel et al. (1975) believe that their three levels of satisfaction are aggregative, this research makes no such assumption but will explore the relationship existing between distribution system satisfaction and the three components of post-search satisfaction, post-servicing satisfaction and satisfaction with the product performance.

3.3 OPERATIONALISATION OF THE DEPENDENT AND INTERVENING VARIABLES.

This section presents the operational definitions of the seven dependent and intervening variables selected for analysis. Since this model will be tested with a sample of recent purchasers of new automobiles, the distribution system consists of car dealers and the product is a new automobile. The expectations and disconfirmation measures are given at the attribute-specific level. A set of equivalent satisfaction measures follows.

Expectations: The two expectation constructs have been previously defined as a set of pre-search and pre-servicing beliefs about the benefits and costs associated with consumer interactions with the stores/dealers distributing a specific product category. Consequently in this study, each expectation construct will be measured

using a procedure similar to the one adopted by Thirkell (1980). First, consumers will give their ratings on a number of five-point bipolar scales measuring the subject's perceptions of the dealers' (or dealer's) position on a set of attributes, for each one of the two expectation constructs. Then, respondents will rate the importance of each attribute to them on a five-point semantic differential scale ranging from unimportant to important. The mean sum of the product of all attributes ratings and their associated importance weights will be the measure of the consumer's global pre-search and pre-servicing expectations. In mathematical form, these measures of expectations are as follows:

$$E'G = \left[\sum_{i=1}^{n} (Ei.Ii) \right]/n$$

where:
- E'G = global expectation measure
- Ei = expectation on attribute i
- Ii = importance of attribute i to the consumer
- n = number of i attributes to the consumer

This procedure implies the use of the aided-recall method. To reduce the chance of bias associated with this method, respondents will only rate the items they considered before entering the search process. Respondents will also have the opportunity to add their own expectation attributes, if they think about items that are not included in the list presented to them. In addition, the use of importance weights will help to offset possible aided-recall biases. Finally, to prevent order effects, the ratings of some of the items of the expectation scales will be reversed in the questionnaire.

The final set of attributes items for each one of the two expectation constructs stems from three sources. One is the literature dealing with previous automobile and car dealer studies, another is in-depth interviews with several car dealers, and the final source is personal interviews with purchasers of new automobiles. Appendix A, Q11 and Q12, provide the list of items developed for each expectation construct, and the corresponding poles of the five-point semantic differential scales used.

Disconfirmation: Based on evidence presented by Thirkell (1980) which demonstrates the superiority of the compensatory model over two other models, this study adopts a compensatory model of disconfirmation. To ensure consistency with the expectations measures developed above, the same two sets of attributes will be used. Further, the relative importance weights of the specific attributes as measured for the expectation items will moderate the process.

The following mathematical equation summarizes the global measure of post-search and post-servicing disconfirmation adopted in this study.

$$D'G = [\sum_{i=1}^{n}(Di.Ii)]/n$$

where:
D'G = global disconfirmation measure
Di = disconfirmation of attribute i
Ii = importance of attribute i
n = number of i attributes considered

Again, the questionnaire will allow consumers to omit items which they did not consider and to add items which they had considered

but which were not in the list offered to them. A five-point scale, ranging from "Much worse than expected" to "Much better than expected", is the measure for each disconfirmation item (Appendix A, Q17 and Q27).

Satisfaction: Operationalisation of post-search and post-servicing satisfaction is accomplished in a somewhat different manner from the other dependent variables. A study by Aiello, Czepiel and Rosenberg (1977) on different satisfaction measures indicates that weighting responses by respondent importance produces findings of doubtful validity and reliability. Another study by Morris, Winter and Crull (1980) focusses on several types of transformed and untransformed, as well as weighted and unweighted satisfaction scales. The results indicate the superiority of two scales: 1) the raw unweighted sum of scores on a series of items and 2) the weighted (using respondent's importance ratings) transformed (using more extreme scores for dissatisfaction than for satisfaction) sum of a series of items. The authors conclude that transformations and weights really do not make very much difference in correlations, regressions and reliabilities. They suggest that if there is no other obvious basis on which to decide, the most parsimonious technique seems best (raw-unweighted). Westbrook (1980b), investigating different satisfaction rating scales, demonstrates the superiority of verbal rating scales over graphic rating scales and other types of scales (Likert summated scale, semantic differential scale, influential satisfaction measure).

Given the evidence of these three studies, this research utilises a simple raw unweighted sum of scores on a series of items corresponding to that of Q11 and Q22, Appendix A, to measure post-search and post-servicing satisfaction. However, the instrument again will allow respondents to omit items not thought about or which do not apply to their individual case, and also to add items reflecting their own experience with car dealers. Therefore, to make possible comparisons between respondents with different numbers of items, the sum of the submeasure ratings will be averaged for each respondent. The mathematical equation corresponding to the two measures of satisfaction used in this study is:

$$S'G = \left(\sum_{i=1}^{n} Si\right)/n$$

where: S'G = global satisfaction measure
Si = satisfaction on attribute i
n = number of i attributes considered

A five-point satisfaction scale ranging from "Very satisfied" to "Very dissatisfied" will measure each submeasure of satisfaction (Appendix A, Q19 and Q29).

Finally, overall satisfaction with the distribution system is operationalised as a single overall measure of satisfaction, ranging from "Very satisfied" to "Very dissatisfied" (Appendix A, Q31).

3.4 INDEPENDENT VARIABLES

As discussed in section 3.1 of this chapter, four sets of variables were categorised as independent for the purposes of this study.

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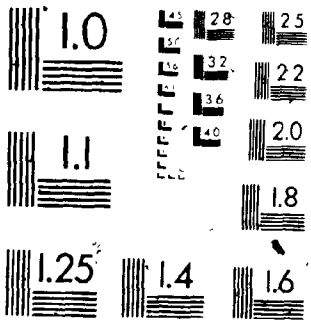

They consist of individual characteristics, prior experience, prepurchase search, and satisfaction with the product performance. Strictly speaking, the last two sets of variables qualify more as intervening than independent variables. But given that their antecedents are not investigated in this study, they were considered as independent variables for analytical purposes. This section defines and operationalises these four sets of independent variables. It also describes the hypothesised relationships between the intervening and the independent variables.

INDIVIDUAL CHARACTERISTICS: This variable set includes the following dimensions: generalised market beliefs, perceived risk, self-confidence and demographics (gender, income and age).

Generalised market beliefs: In this study, generalised market beliefs consists of a series of belief statements about the market and business practices. Lundstrom and Lamont (1975, 1976) developed the original instrument, the Consumer Discontent Scale. They characterise the scale as a measure of consumer attitudes toward the economic domain. The original scale consists of 82 instrumentality statements concerning various conditions, relations and activities in the economic domain. The scale has been shown to have internal consistency and validity between groups of contented and discontented consumers. The instrument has a reported split-half reliability of .96 and a test-retest reliability of .79.

For the purpose of this study, 15 items were selected from the Consu-

mer Discontent Scale. These items represent beliefs about business practices related to the consumer's prepurchase search, and also to the after-sale repair and servicing of products. Q1, Appendix A, shows the selected items. Summing the scores of the fifteen items of the scale will produce a single generalised belief score for each consumer. Positive items will be scored from 1 for "strongly agree" statements to 6 for "strongly disagree" statements. Negative statements will be reversed in scoring from 6 to 1. Hence greater scores on the overall scale will represent higher levels of discontent, or more pessimistic generalised beliefs about the system.market.

It is intuitively appealing to think that people with more optimistic beliefs would "per se" have higher expectations, in the sense that their whole set of anchor points would be at a higher level. However, Thirkell's study (1980) gives no indication that this is the case. Therefore, it appears that the relationship between expectations and generalised market beliefs is still unclear and remains to be defined. However, it is believed that generalised market beliefs will be negatively related to disconfirmation of expectations, as demonstrated by Thirkell (1980). In other words, the predisposition of a given consumer toward the market and business system in general will also be reflected in product or system specific evaluations made by that consumer.

Perceived risk: Thirkell (1980) shows no apparent relationship between this variable and either expectations or disconfirmation.

However, this lack of result may be attributed in part to the measure of risk used by this researcher. As discussed towards the end of Chapter II, Thirkell uses a global approach to risk as opposed to a risk-component approach which identifies and measures several basic and independent dimensions of overall perceived risk. Thus, the nature of the relationship between perceived risk and expectations or disconfirmation remains open to investigation. In pursuing this investigation, this study uses the risk-component approach to risk rather than the global approach.

In this study, perceived risk is measured on six dimensions. These dimensions are financial, performance, physical, psychological, social and convenience (time) risk. The operational definition is a modified version of the measure developed by Jacoby and Kaplan (1972). A five-point semantic differential scale ranging from "Low chance" to "High chance" will measure the dimensions of perceived risk as illustrated in Q15 of the questionnaire (Appendix A). Summing the scores obtained for each item of the scale will produce a single overall perceived risk score. A high overall score corresponds to high perceived risk.

Specific self-confidence: The literature suggests that consumer satisfaction may be influenced by personality traits. Hence, the expectation in this study is that consumers' evaluation of their abilities and their impression of how others feel about them affect their expectations about the distribution system and the subsequent disconfirmation of these expectations in a positive manner. Since

self-confidence can be felt at two different levels (generalised and product- or task-specific), the expected relationship should be true at least for specific self-confidence, if not also for generalised self-confidence.

Specific self-confidence reflects the assessment of consumers regarding their confidence in handling a specific task or solving a specific problem, in this case choosing and buying a new automobile. This variable will be operationalised in a way similar to the measure developed by Dash, Schiffman and Berenson (1976) except that it will use a five-point instead of a three-point scale. Therefore, this variable will be the result of the product of two items: the consumer's ability in judging the quality of the product, and his confidence in making a good choice. These two items correspond to questions Q13 and Q14, Appendix A.

Demographics: The last dimension of the individual characteristics refers to three demographics: gender, income and age. The literature argues that these individual differences may affect consumer satisfaction but so far, empirical studies show mixed results. Therefore, this part of the study is less solidly based on a theoretical foundation.

The operationalisation of these three variables is as follows. Consumers will be asked their gender and age. Regarding income, consumers will be asked to give their own income, and the total combined income of all the household members for 1980.

PRIOR EXPERIENCE: There is some indication in the literature of the likely impact of past experience upon the purchase situation, the prepurchase search, and the subsequent levels of consumer satisfaction. However, empirical studies and experiments produce mixed results, reflecting the possible influence of the product category and differences in the definition of this construct across studies. Consequently, the nature of the relationship between prior experience and the dependent variables is unclear and will be explored in this study.

This research explores several dimensions of experience: experience with purchasing automobiles (new and used), satisfaction with the last owned automobile, satisfaction with the dealer servicing the last owned automobile, and general knowledge of cars both in terms of car mechanics and of cars available on the market. Adding the scores on two items, knowledge of car mechanics and knowledge of cars on the market will result in this last dimension. The operational definition of each one of these variables corresponds to questions Q24, Q25, Q26, Q5 and Q6 of the questionnaire (Appendix A).

PREPURCHASE SEARCH: This variable consists of the extended, high-involvement search effected by consumers while looking for a new car. It comprises all the activities performed by the consumer in the search for information relevant to decision-making. A number of researchers have studied the types and patterns of information search used by consumers, but few attempts have been made to relate

them to post-purchase levels of satisfaction. Thirkell's study (1980) shows a negative relationship between search and disconfirmation of expectations related to new automobiles. However, it is not known if such a relationship is also applicable to consumer satisfaction at the sub-system level. Consequently, this study investigates the relationship between search and disconfirmation but no formal hypothesis is formulated as such.

The work of several researchers influenced the operationalisation of the search construct. Westbrook and Fornell (1979) suggest two key dimensions of overall search activity: variety of information sources used, and the intensity (depth) of usage within each source. Andreasen (1968) and Locander and Hermann (1979) employ a taxonomy of five information sources used by consumers: impersonal and personal advocates, impersonal and personal independents, and direct observation/experience (See Chapter II). Bell (1967a,b) demonstrates the influence of the purchase pal in the buying process (Purchase pal relates to the people who accompany consumers in their visits to stores/dealers as part of the search for information). Finally, Maddox et al. (1978) mention the use of the test drive as a source of information for car purchasers.

This study adopts the operational definition of search developed by Thirkell (1980) with two modifications. First, his fourth search dimension (Product Observation/Personal Advocate) is separated into two. Secondly, purchase pal is included in the fourth dimension: Personal Advocate. Therefore, this study uses five major search dimen-

sions, with single measures of variety and intensity respectively within each. The dimensions are essentially as operationnally defined by Locander and Hermann (1979).

The variety measures will be a simple count of the number of sources used within a particular search dimension. For example, the impersonal independent scale will range from zero to three, depending on the number of sources consulted. The depth scale takes into account the numbers of sources used in a set. For example, the impersonal advocate scale will be a total count of all mass media supports consulted during the search. The specific scale ranges, their item components and the corresponding question numbers (Appendix A) are presented below.

SEARCH MEASURE	VARIETY SCALE RANGE	DEPTH SCALE RANGE	QUESTION NUMBER
Impersonal Advocate	(0-3)	(0-?)	Q7,Q8 (1st item)
Impersonal Independent	(0-3)	(0-?)	Q8 (items 2 to 4)
Personal Independent	(0-4)	(0-?)	Q8 (items 5 to 7),Q9
Personal Advocate	(0-15)	(0-?)	Q10
Direct Observation	(0-1)	(0-?)	Q10

SATISFACTION WITH THE PRODUCT PERFORMANCE: This last independent variable represents the consumer's evaluation of the product. It will be measured with a five-point single item scale ranging from "Very satisfied" to "Very dissatisfied" (Q32, Appendix A).

Table 3.1 summarizes the various measures discussed so far and indicates the corresponding questions from the questionnaire (Appendix A) used to measure the variables.

OTHER MEASURES: While not directly related to the testing of the formal model, several other measures will be taken. First, to facilitate the comparison between the results obtained in this study and in studies previously performed by Ash (1979) and Thirkell (1980), and to provide further insights into the characteristics of dissatisfied consumers, a series of six demographic measures will be included: marital status, size of household, education, employment status, occupation and size of community.

Secondly, data will be gathered on the new car (make, model, year, current kilometers), the number of trips to the dealer for warranty service since purchasing the car, and the number of drivers of the new car. Further, respondents will be asked where they plan to have their car serviced after the warranty expires and, if not at the car dealer where the car was bought, why. Similarly, respondents will be asked where they had their previous car serviced. Finally, two questions will be asked which relate to how trustworthy car dealers are. This set of data will be useful to managers for diagnostic purposes in pinpointing specific reasons for dissatisfaction, as well as providing a further means of validating the general conclusions obtained from the testing of the formal hypotheses.

TABLE 3.1

OPERATIONALISATION OF THE VARIABLES

VARIABLE	QUESTION NUMBER
Pre-search expectations	Q11, Q12
Pre-servicing expectations	Q22, Q23
Post-search disconfirmation	Q17, Q12
Post-servicing disconfirmation	Q27, Q23
Post-search satisfaction	Q19
Post-servicing satisfaction	Q29
Overall satisfaction with the distribution system	Q31
Satisfaction with product performance	Q32
Individual characteristics	
Generalised market beliefs	Q1
Perceived risk	Q15
Self-confidence	Q13, Q14
gender	Q43
Income	Q48
Age	Q42
Prior Experience	
General knowledge of cars	Q5, Q6
No. of previously owned cars	Q24
Satisfaction with last owned car	Q25
Satisfaction with previous repair outlet	Q26
Prepurchase search	
Impersonal advocate	Q7, Q8
Impersonal independent	Q8
Personal independent	Q8, Q9
Personal advocate	Q10
Direct observation	Q10

3.5 HYPOTHESES

This section presents the twelve formal hypotheses to be tested in this study. These hypotheses were constructed so as to validate some of the relationships described in the research model. H1 to H6 concern the interrelationships among the dependent and intervening variables, while H7 to H12 concern the relationships among the intervening and the independent variables.

According to the research model, post-search and post-servicing satisfaction is a function both of the level of expectations and of the degree of disconfirmation. The independence of prior expectations and subsequent levels of disconfirmation will also be tested.

H1 Disconfirmation is independent of expectations held by consumers.

a) Post-search disconfirmation is independent of pre-search expectations.

b) Post-servicing disconfirmation is independent of pre-servicing expectations.

H2 There is a curvilinear relationship between levels of satisfaction and levels of expectations.

a) There is a curvilinear relationship between levels of post-search satisfaction with the dealers/stores selling a product and levels of pre-search expectations.

b) There is a curvilinear relationship between levels of post-servicing satisfaction with the dealer/store servicing a product and levels of pre-servicing expectations.

This second hypothesis states that among consumers with higher expectations, there are more extreme feelings of satisfaction or dissatis-

faction.

H3 Levels of satisfaction vary directly with increasing negative to positive levels of disconfirmation.

a) Levels of post-search satisfaction with the stores/dealers selling a product vary directly with negative to positive levels of post-search disconfirmation.

b) Levels of post-servicing satisfaction with the store/dealer servicing a product vary directly with negative to positive levels of post-servicing disconfirmation.

The first three hypotheses explore the interrelationships between pairs of intervening variables. Hypotheses four and five provide a more powerful test by exploring the simultaneous effect of both expectations and disconfirmation on consumer satisfaction.

If the data analysis gives support to the second hypothesis, then H4 and H5 will be tested keeping separate the satisfied and the dissatisfied consumers. The testing of these two hypotheses will help to demonstrate the existence of the "zones of indifference" or "tolerance regions" mentioned in Chapter II and at the beginning of this chapter.

H4 Levels of post-search satisfaction with the stores/dealers selling a product vary directly with:

1) increasing levels of pre-search expectations and

2) increasing negative to positive levels of post-search disconfirmation.

H5 Levels of post-servicing satisfaction with the store/dealer servicing a product vary directly with:

1) increasing levels of pre-servicing expectations and

2) increasing negative to positive levels of post-servicing disconfirmation.

The next hypothesis investigates the effect of three different kinds of satisfaction on overall satisfaction with the distribution system. The results of this hypothesis will contribute to the understanding of the concept of system satisfaction developed by Czepiel, Rosenberg and Akarele (1975).

H6 Levels of overall satisfaction with the distribution system of a product vary directly with:

1) levels of post-search satisfaction with the stores/dealers selling the product.

2) levels of post-servicing satisfaction with the store/dealer servicing the product.

3) levels of satisfaction with the product performance.

The final six hypotheses investigate the effect of three of the independent variables on the expectation and disconfirmation variables. Tables 3.2 and 3.3 summarize the set of independent measures defined and their hypothesised effect upon these intervening variables. Previous studies as well as theory suggested some of the hypothesised relationships. In these cases, plus and minus signs are displayed. Since the depicted relationships are expected to be confirmed, one-tailed tests will be used in the statistical analysis. The question marks (?) represent cases where the relationships are still unclear and need to be clarified. As research questions, these relationships are stated in the form of the null hypo-

thesis, and the analysis will involve two-tailed tests.

TABLE 3.2

HYPOTHESISED INDEPENDENT VARIABLE EFFECTS UPON EXPECTATIONS.

INDEPENDENT VARIABLE	HYPOTHESISED DIRECTION	
	PRE-SEARCH EXPECTATIONS	PRE-SERVICING EXPECTATIONS
H7 INDIVIDUAL CHARACTERISTICS		
a) gender (Female buyer)	+	+
b) income	-	-
c) age	?	?
d) market beliefs	N/R	N/R
e) perceived risk	?	?
f) specific self-confidence	+	+
H8 PRIOR EXPERIENCE		
a) general knowledge of cars	-	-
b) no. of previously owned cars	-	-
c) satisfaction with last owned car	+	N/R
d) satisfaction with previous dealer	N/R	+
H9 PREPURCHASE SEARCH		
a) variety	N/A	-
b) depth	N/A	-

N/R: no statistically significant relationship
N/A: not applicable

TABLE 3.3

HYPOTHESISED INDEPENDENT VARIABLE EFFECTS UPON DISCONFIRMATION

INDEPENDENT VARIABLE	HYPOTHESISED DIRECTION	
	POST-SEARCH DISCONFIRMATION	POST-SERVICING DISCONFIRMATION
H10 INDIVIDUAL CHARACTERISTICS		
a) gender (Female buyer)	?	?
b) income	?	?
c) age	?	?
d) market beliefs	-	-
e) perceived risk	?	?
f) specific self-confidence	+	+
H11 PRIOR EXPERIENCE		
a) general knowledge of cars	?	?
b) no. of previously owned cars	?	?
c) satisfaction with last owned car	?	?
d) satisfaction with previous dealer	?	?
H12 PREPURCHASE SEARCH		
a) variety	-	?
b) depth	-	?

CHAPTER IV

RESEARCH METHODOLOGY

This chapter presents the sampling and data collection procedures employed in the research as well as the response rate and sample characteristics obtained. It also discusses the issues of scale reliability and construct validity. The sampling frame used was a regional subset of Ontario residents who had purchased a new passenger car within the previous six months. The data collection instrument consisted of a mail questionnaire which was completed by the purchaser and main user of that automobile. The dependent and intervening variables of the study were in most instances validated by the empirical data and the scales used were fairly reliable.

4.1 RESEARCH DESIGN

The study focussed on testing the interrelationships between consumer expectations, disconfirmation and satisfaction, rather than on estimating the 'true' level of satisfaction among the Canadian population. To test these interrelationships a mail survey of Canadian consumers who had bought a new automobile within the previous six months was undertaken. The conceptual model developed in Chapter III provided the framework for this study. This model conceptualizes consumer satisfaction with the distribution system for a durable product as a process involving several stages. A longitudinal study was therefore a possible research design, but it was rejected for several reasons. Firstly, the cost of conducting such a study,

both in terms of financial resources and time, is quite high. Secondly, it is very difficult, even impossible, to identify the precise moment when consumers decide to change cars. Finally, closely following the activities of a given consumer over several weeks or months for a single, major purchase such as a car may create biases in the sense that the consumer's behaviour may be influenced or changed by the observation.

For all these reasons, data collection for this study was by means of a mail questionnaire. The questionnaires were sent to consumers who had purchased a new passenger car within the previous six months and who were the principal drivers of that automobile. While avoiding the problems mentioned above, this procedure had some of the disadvantages associated with after-the-fact recall measures. For example, research shows that when consumers describe their prepurchase search activities using this type of measurement, they generally underestimate the amount of search done (Jacoby et al., 1978).

In order to minimise these problems, the aided-recall method was employed. This choice raised the question of content validity since it required the respondent to answer from a list of pre-specified categories which may not have reflected the respondent's own experience. Content validity concerns the representativeness or sampling adequacy of the content of the measuring instrument. Content validation consists essentially of judgements and is usually performed by examining the design of the research plan and procedures. In this study, the domain of study centered primarily around the set

of attributes salient to consumers throughout their experiences in dealing with new automobile dealers, both when they purchase a new car, and during the warranty period of that car. To ensure content validity, the attribute items in both stages of the process were carefully chosen. The selection of these items followed a review of previous automobile and dealership studies. Interviews with local car dealers and recent purchasers of new automobiles also helped. The result was an extensive list of items for the two stages. For each intervening variable scale, respondents also had the opportunity to add items which reflected their own experience but which were not included in the list offered to them. A check of the responses received showed that few respondents made use of the open-ended expectation, disconfirmation and satisfaction items in the questionnaire. This result suggests that there is a reasonable level of content validity.

As mentioned earlier, the sample consisted of consumers who had purchased a new passenger car within the previous six months. A six month period was chosen as a selection basis for the respondents for two reasons. Firstly, the research investigated the second stage of the buying process which covers the servicing done during the warranty period of the car. Therefore, it was important for consumers to have had their new car for a sufficiently long period of time to allow them to have it serviced at least once. The period of six months ensured that the post-servicing disconfirmation and satisfaction measures were relevant to the respondents thus allowing them to answer all the questions asked.

Secondly, the purchase of a car is a major purchase for most consumers, and therefore, they probably devote considerable time and effort to the purchase process of that product. Despite the importance of the purchase however, it was believed that the period chosen should not be so long that respondents would have problems recalling their expectations prior to engaging in their search activities.

To ensure that the questions were unambiguous and easily understood, the questionnaire was pre-tested among 25 respondents who had purchased a new automobile within the previous year. The respondents were students enrolled in the Business School at the University of Western Ontario. After completing the questionnaire, the respondents commented on the questions and indicated the ambiguous or problematic items. They also discussed their own experiences with the purchasing and servicing of cars. These experiences helped in the development of the dependent and intervening variable scales. The results of this pre-test suggested a few minor modifications to the form of certain questions.

The discussion with the pre-test respondents also suggested that consumers had few problems recalling their pre-search and pre-servicing expectations six months after the event. The respondents noted that because purchasing a car was such an important event, they had little difficulty remembering what they had expected from the dealer and the product prior to buying the car. Most gave very precise examples of what they expected even if they had purchased

their car up to a year before. In any case, a test (the results of which are reported in section 4.5 of this chapter) was planned to ensure that no systematic biases were associated with the length of time between purchase and data collection of consumer expectations. Appendix A shows the final questionnaire used to collect the data.

Data collection consisted of mailing the questionnaire, a covering letter, and a reply-paid envelope in two waves, two weeks apart. The covering letter accompanying the first-wave questionnaire briefly described the intent of the study, requested that the questionnaire be completed by the principal driver when a new car had been purchased within the previous year, and promised to donate one dollar to a charity of the respondent's choice for completing the enclosed questionnaire. The letter included in the second-wave briefly reiterated the objectives of the study, reminded recipients of the one dollar donation, and repeated the instructions as to who should complete the questionnaire. Appendix A also shows these two letters.

The next section presents the sampling procedure planned and the problems which occurred in trying to implement this procedure. It also discusses the consequent limitations as a result of these problems.

4.2 SAMPLING

The planned sampling procedure for this study relied on a sampling

frame obtained from the official provincial records of car registrations. Prior discussions with car dealers indicated that certain sampling parameters should be implemented in order to reflect differences in dealer practices and to ensure the representativeness of the sample. As a result, a quota sampling plan utilizing four key parameters, as illustrated in Table 4.1, was planned.

Gender: The phenomenon of women buying products traditionally oriented towards men is fairly recent. Because of changes in lifestyles, values and working status, women appear to be increasing their purchase of items such as automobiles, insurance, houses and financial services. How well marketers adapted to the needs and behaviours of this new segment of buyers is still largely unknown. Duhaime and Ash (1980) report that there seems to be a growing feeling, shared by many women, that females tend to receive less favourable treatment than males in the marketplace, at least for major purchases of goods and services. Discussions with car dealers and women buyers indicated that this may be the case for automobile purchases. Thus, it was expected that this feeling among women would be reflected in consumer expectations and satisfaction with car dealers.

Origin of Car: Discussions with car dealers indicated some differences in practices depending on the origin of the car. For example, quite frequently domestic (i.e. North American) cars are better supplied than imported cars due to an easier and faster access to the market by manufacturers. A better supply means that buyers of domestic cars can often leave the showroom with the car they

TABLE 4.1

SAMPLING PARAMETERS

Gender	*Male *Female
Origin of the car	*Domestic (North American) *Imported
Province	*Alberta *Ontario *Nova-Scotia
Location	*Urban (Edmonton, Toronto, Halifax) *Rural

want, that they do not have to wait several weeks for delivery of the right model or right colour car. Also, if consumers of domestic cars request special options such as a larger engine size or an automatic rather than standard transmission, they do not have to wait for as long a period of time as it may be the case for imported cars which sometimes have to be ordered from abroad.

Further, there is often a better chance of price negotiation among dealerships selling North American cars versus imported cars, especially for larger cars. These differences may be reflected in the satisfaction experienced by consumers. Therefore, it was judged necessary to have an equal number of domestic and imported cars when choosing the sample in order to be able to make comparisons between these two groups of consumers.

Location: The proposed sample controlled for location both in terms

of geographical position and on an urban/rural dimension. Given that market conditions and buying behaviours might differ depending on where consumers live, it was decided to choose a sample which would be, as much as possible, representative of the Canadian situation. Therefore, three provinces (Alberta, Ontario and Nova-Scotia) were chosen since they represented a spread of geographical locations across Canada.

In addition, it was decided that the sample should contain an equal representation of buyers who live in a large metropolitan area (the cities of Edmonton, Toronto and Halifax) -the urban segment- and those who live in rural districts in reasonable proximity to these three main centers -the rural sub-sample.

To be truly representative of the Canadian population at large, the sample should have included buyers from the province of Quebec since this province contains a very high proportion of French-speaking consumers. However, this addition would have required a translation and maybe even an adaptation of the questionnaire which would have increased the difficulty of collecting the data. The exclusion of this province from the sample constitutes a limitation of this study.

Sample Size: The sample size for this study was estimated at 600 respondents. After considering all sampling parameters, an average cell size of 25 was the main criterion used to calculate the desired sample size. This number was chosen to ensure a sufficient number

of respondents in each category for the purpose of the statistical analyses to be done. The formula used is illustrated below.

Desired 'N' = Gender (2) x Origin of car (2) x Province (3)
x Location (2) x Average cell size (25)
= 600

Given that the percentage of potential respondents who may be purchasers but not main drivers of the new car may be as high as 20 percent, and allowing for a response rate of 30 percent for those receiving the questionnaire and meeting the first criterion, the initial mailout was set at 2500.

Final Sample: The final sample turned out to be substantially different from the one initially planned. Because of some bureaucratic mixups and provincial regulations, the final sample was restricted to the province of Ontario and the gender and car origin parameters could not be consciously built into the sample selection. The final sample also turned out to be drawn from a mix of large and small cities rather than from urban and rural areas. Because of these modifications, the sample size was reduced from 2500 to 1200, a size which ensured that a sufficient number of both women and imported car buyers would be represented in the sample. These modifications to the sample mean that some caution should be exercised in generalising the results of this study, especially in terms of estimating the true level of satisfaction among the Canadian population.

4.3 RESPONSE RATE AND SAMPLE CHARACTERISTICS

The final response rate achieved in this study was 40.8% of the 1200 questionnaires mailed. Of the 490 questionnaires returned, 110 were unusable. These questionnaires were unusable either because the buyer was not the main driver of the new car (55.5%), or because the questionnaire had too many unanswered questions[1] (29.1%), or because the questionnaire was sent back unanswered (14.5%), or because the car was no longer under warranty (.9%). Therefore, the usable sample consisted of 380 respondents, or 31.7% of the original mailing list. Table 4.2 presents the details of the sample response profile.

Of the 380 respondents, 66.2% had purchased a domestic car while 33.8% had purchased an imported car. Similarly, 31.7% of the respondents were women while 68.3% were men. These figures are consistent with the information provided by the car dealers interviewed during the planning phase of this study. Other characteristics of the sample such as age, marital status, education, employment status, occupation, household size and income can be found in Appendix B. The tables of this appendix present the distribution of respondents, by origin of cars, for each variable.

An examination of the usable questionnaires revealed that the incidence of missing data across all the questions was quite small.

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[1] A questionnaire was rejected if two or more of the intervening or dependent variable scales were not answered.

TABLE 4.2

SAMPLE RESPONSE PROFILE

			PERCENT
1. INITIAL MAILINGS (Two waves)		1200	100.0
2. RETURNS TO SENDER: moved	14		
other reason	20		
TOTAL RETURNS TO SENDER		34	2.8
3. POTENTIAL RESPONDENTS		1166	97.2
4. NON-RESPONSE		676	56.3
5. TOTAL QUESTIONNAIRES RETURNED		490	40.8
6. UNUSABLE QUESTIONNAIRES:			
Respondent not main driver	61		
Incomplete questionnaire	32		
Car not under warranty	1		
Sent back unanswered	16		
TOTAL UNUSABLE QUESTIONNAIRES		110	9.2
7. DATA-BASE SAMPLE: domestic cars	248		
imported cars	127		
not specified	5		
TOTAL DATA-BASE SAMPLE		380	31.7

In a few cases, the respondents answered to some of the expectation and disconfirmation items but omitted to give an answer to the corresponding importance items. In these cases, the missing importance items were replaced by the importance item means. Also, a few respondents did not answer all the items in the general market belief or the perceived risk scales in which case the missing items were also replaced by the scale means. The only variables for which there was a somewhat higher number of missing data consisted of the demographic variables occupation and income. The missing data amounted to 56 cases (14.7%) for occupation, 58 cases (15.3%) for

amounted to 56 cases (14.7%) for occupation, 58 cases (15.3%) for personal income and 124 cases (32.6%) for household income. Nothing was done to replace the missing data on these variables.

No attempt was made to identify non-response bias. One reason is that the questionnaires did not identify the respondents' identity. The anonymity of the questionnaire was designed to encourage maximum consumer response to the survey. However, the mailing list in addition to providing the names and addresses of the automobile buyers, also provided the make of car purchased. On the basis of the brand of automobile, the mailing list and the final sample were compared. Table 4.3 presents the two sample distributions. A Chi-square test was used to make this comparison. Given that a few cells had an insufficient number of cases to make that test, some of the categories were regrouped so that each cell had at least five cases. Cadillac, GMC and Jeep were grouped together on the basis that they are all domestic cars, while Audi, Fiat, Lada, Mercedes, M.G., Renault, Subaru and Volvo were grouped together, for they are all imported cars. The Chi-square test showed that there was no statistical difference between the mailing list and the final sample distributions (Chi-square = 14.25, d.f. = 16, significance = .50).

This finding does not guarantee the absence of non-response bias. It does, however, assure a good representation of the different automobile makes on the market at the time of the study, a situation which adds some external validity to the research.

TABLE 4.3

COMPARISON OF SAMPLE DISTRIBUTIONS

AUTOMOBILE MAKE	MAILING LIST			FINAL SAMPLE		
	ABSOLUTE FREQ	ADJUSTED* FREQ (PCT)	CUMUL FREQ	ABSOLUTE FREQ	ADJUSTED* FREQ (PCT)	CUMUL FREQ
AUDI	6	0.5	0.5	1	0.3	0.3
AMC	25	2.1	2.6	13	3.5	3.7
BUICK	69	5.8	8.4	19	5.1	8.8
CADILLAC	7	0.6	9.0	1	0.3	9.1
CHEVROLET	208	17.4	26.4	63	16.8	25.9
CHRYSLER	23	1.9	28.3	11	2.9	28.8
DATSUN	60	5.0	33.3	21	5.6	34.4
DODGE	78	6.5	39.8	17	4.5	38.9
FIAT	6	0.5	40.3	3	0.8	39.7
FORD	75	6.3	46.6	19	5.1	44.8
GMC	4	0.3	46.9	5	1.3	46.1
HONDA	168	14.0	60.9	50	13.3	59.5
JEEP	5	0.4	61.3	1	0.3	59.7
LADA	10	0.8	62.1	1	0.3	60.0
MAZDA	34	2.8	64.9	13	3.5	63.5
MERCEDES	3	0.3	65.2	1	0.3	63.7
MERCURY	64	5.4	70.6	24	6.4	70.1
M.G.	1	0.1	70.7	1	0.3	70.4
OLDSMOBILE	134	11.2	81.9	36	9.6	80.0
PLYMOUTH	52	4.4	86.3	13	3.5	83.5
PONTIAC	85	7.1	93.4	26	6.9	90.4
RENAULT	2	0.2	93.6	0	0.0	90.4
SUBARU	6	0.5	94.1	1	0.3	90.7
TOYOTA	48	4.0	98.1	24	6.4	97.1
V.W.	19	1.6	99.7	9	2.4	99.5
VOLVO	4	0.3	100.0	2	0.5	100.0
MISSING/OTHER	4	MISSING	100.0	5	MISSING	100.0
TOTAL	1200	100.0		380	100.0	

* FREQUENCY AFTER THE REMOVAL OF MISSING CASES.

CHI-SQUARE = 14.25 WITH 16 DEGREES OF FREEDOM

So as to ensure that the new automobiles would still be under warranty when the respondents participated in the survey, the sampling frame included only consumers who had bought a new car within the previous six months. Table 4.4 shows the sample distribution by time since purchase. All the respondents had bought their new car within the previous eleven months, while 85% had bought it within the previous six months. Therefore, it is likely that most of the respondents' cars were under warranty at the time of the survey.

4.4 DEPENDENT AND INTERVENING VARIABLE SCALE DISTRIBUTIONS AND RELIABILITIES

An 'averaging' method was used to generate the summary expectation and disconfirmation measures. With this method, each attribute-specific item is multiplied by its associated importance weight, and the sum of these numbers is divided by the number of scale items answered. Given that the respondents were asked to answer only the items that they considered when shopping for a new car or when evaluating their dealer's service, this method has the advantage of not penalizing consumers who reported expectations and disconfirmations for relatively few items.

Over 97% of the respondents answered at least 8 of the 11 items on the expectation and disconfirmation scales of the search stage. Therefore, the adoption of the "aggregate sum" method (with this method, each attribute-specific item is multiplied by its associated importance weight and then all are summed to produce an overall

TABLE 4.4

SAMPLE DISTRIBUTION BY TIME SINCE PURCHASE

NUMBER OF MONTHS SINCE PURCHASE	NUMBER OF RESPONDENTS	CUMULATIVE FREQUENCY (PERCENT)
1	7	1.9
2	7	3.7
3	38	13.8
4	92	38.2
5	103	65.5
6	73	84.9
7	26	91.8
8	8	93.9
9	8	96.0
10	9	98.4
11	6	100.0
TOTAL	377	

NUMBER OF MISSING OBSERVATIONS = 3

score) instead of the "averaging" method would have generated highly similar results. However, since 21.5% of the respondents answered less than 15 of the 18 items on the scales of the servicing stage, the "averaging" method was better suited.

In this study, disconfirmation is defined as the extent to which performance is perceived by consumers as being greater than, equal to or less than prior expectations. In the questionnaire, the disconfirmation scales ranged from +1 for "much worse than expected" to +5 for "much better than expected". During the data analysis, these five-point scales were modified so as to conform to the definition of disconfirmation. "Much worse than expected" became -2, "much better than expected" became +2 and "as expected" became 0,

thus providing a better representation of negative disconfirmation, positive disconfirmation and confirmation.

Dependent and Intervening Variable Scale Distributions - Before discussing scale reliability and construct validity, the nature of the dependent and intervening variable distributions will be explored. This exploration is necessary since the nature of these distributions will influence the kind of statistical test to be used in the data analysis, given the ordinal nature of these scales.

Table 4.5 displays some statistics which describe the distributions of the seven variables. The Kolmogorov-Smirnov one-sample test shows that t[illegible] of the three satisfaction measures severely depart from normality. The distributions of these three variables are rather flat, and they are skewed to the left indicating that there is a higher proportion of people who are in the satisfaction range as opposed to the dissatisfaction range. The skewness of the satisfaction measure distributions is consistent with the general pattern observed in previous CS/D studies.

The distributions of the two expectation measures appear to be much closer to a normal distribution than those of the previous satisfaction measures. The Z statistics in Table 4.5 and their associated levels of significance support this observation. The levels of significance for these two scales indicate that the distributions do not severely depart from normality, even if they are negatively skewed and are somewhat flat.

TABLE 4.5

TESTS OF NORMALITY FOR DEPENDENT AND INTERVENING VARIABLE DISTRIBUTIONS

OVERALL SATISFACTION WITH THE DISTRIB. SYSTEM	Mean	3.663	Kurtosis	- .627
	Std. Dev.	1.103	Kol-Smir Z	4.441
	Skewness	- .497		(.000)*
POST-SEARCH SATISFACTION	Mean	3.630	Kurtosis	- .300
	Std. Dev.	0.752	Kol-Smir Z	1.056
	Skewness	- .024		(.215)
POST-SERVICING SATISFACTION	Mean	3.750	Kurtosis	- .555
	Std. Dev.	0.899	Kol-Smir Z	1.685
	Skewness	- .279		(.007)
PRE-SEARCH EXPECTATIONS	Mean	14.456	Kurtosis	- .225
	Std. Dev.	3.369	Kol-Smir Z	0.639
	Skewness	- .048		(.809)
PRE-SERVICING EXPECTATIONS	Mean	17.260	Kurtosis	- .506
	Std. Dev.	3.876	Kol-Smir Z	0.957
	Skewness	- .199		(.319)
POST-SEARCH DISCONFIRMATION	Mean	0.152	Kurtosis	2.468
	Std. Dev.	1.653	Kol-Smir Z	1.659
	Skewness	- .022		(.008)
POST-SERVICING DISCONFIRMATION	Mean	0.038	Kurtosis	4.687
	Std. Dev.	2.388	Kol-Smir Z	2.510
	Skewness	.201		(.000)

*Kolmogorov-Smirnov "Z" significances in parentheses.

Finally, the distributions of the two disconfirmation scales, post-search disconfirmation and post-servicing disconfirmation, are extremely peaked. The Kurtosis coefficients of 2.468 and 4.687 respectively, support this observation. These distributions are also skewed, negatively for the post-search disconfirmation measure, and positively for the post-servicing one. These two findings explain why the Kolmogorov-Smirnov Z statistics are both significant at the .01 level, which indicate that the disconfirmation distributions severely depart from normality.

In summary, four of the seven dependent and intervening variable distributions depart significantly from normality. The implications of this finding for data analysis will be discussed in section 5.1 of the next chapter.

Intervening Variable Scale Reliabilities - Cronbach's alpha was the method used to assess the reliability of the scales for the intervening variables. This particular method estimates the internal consistency of the scales. Table 4.6 displays the alpha coefficients for the six scales. The individual items used to evaluate the reliabilities of the expectation and disconfirmation scales were the products of the respective attribute items and their associated importance weights. This procedure is consistent with the method of constructing the summary variables. In estimating the reliability of the satisfaction scales, the items were taken directly as completed on the questionnaire without being weighted. The table indicates that Cronbach's coefficient alpha range from .70 to .96.

TABLE 4.6

INTERVENING VARIABLE SCALE RELIABILITIES

SCALE	CRONBRACH'S COEFFICIENT ALPHA	NUMBER OF ITEMS[2]	NUMBER OF CASES[3]
PRE-SEARCH EXPECTATIONS	.70	11	247
PRE-SERVICING EXPECTATIONS	.90	18	249
POST-SEARCH DISCONFIRMATION	.73	11	230
POST-SERVICING DISCONFIRMATION	.92	18	179
POST-SEARCH SATISFACTION	.90	11	202
POST-SERVICING SATISFACTION	.96	18	166

Reliabilities above .50 are generally considered acceptable for consumer behavior studies in the early stages of research (Peter, 1979), so that the scales of this study can be regarded as fairly reliable.

4.5 VALIDITY OF THE MEASURES

This section discusses the validity of the measures used in the research. Validity refers to the extent to which an indicator of some abstract concept measures what it purports to measure. Since the purpose of this study is not to predict external behaviour,

[2]Each scale includes only the items which were specified in advance by the researcher.

[3]This number includes only the respondents who answered all the items of the scale.

the issue of criterion validity will not be discussed. Content validity was discussed in section 4.1 of this chapter.

Given that concepts such as expectations are fairly abstract and theoretical, it is appropriate to discuss the issue of construct validity. Construct validation is a process which involves three distinct steps: suggesting what constructs possibly account for test performance, deriving hypotheses from the theory involving the construct, and testing the hypotheses empirically (Carmines and Zeller, 1979). Therefore, construct validation includes the entire formulation and empirical analysis of theoretical relationships proposed. Thus, the ultimate test of construct validity is the confirmation of the hypothesized relationships. Consequently, the final assessment of construct validity will be reserved until the testing of the hypotheses is completed. However, specific aspects of construct validity can be addressed now. The rest of this section discusses these issues.

Expectations - In this study, consumers were asked to recall what they expected from their dealers at the time when they started looking for a new car to buy (the search stage), and at the time when they had just purchased their new car (the servicing stage). How long is the period between the formation of pre-search expectations -the beginning of the information search by consumers- and the administration of the questionnaire? It is impossible to evaluate this period with certainty since no specific question was asked on that issue. It can be assumed that for most of the respondents, this

period was less than a year, since all the cars were bought within a period of eleven months, with 85.6% bought within six months of the study.

This procedure clearly raises the question of possible time-related biases in the results obtained. This bias is possible if consumers have difficulty recalling their pre-search expectations. To assess the extent of this problem, Spearman Rank correlation tests were performed between the expectation measures and time since purchase. The objective was to see if consumers who had purchased a new car near the time of the survey reported higher or lower expectation levels than those who had purchased their automobile at an earlier period. In other words, does time affect in any way the memory people have of their expectations? Table 4.7 presents the results of this test. The correlations obtained are respectively -.061 at the search stage and .003 at the servicing stage, and they are not statistically significant at the .05 level. These results indicate that time-related biases are relatively minor.

The use of retrospective data brings another concern regarding the validity of the expectation variables. It is possible that respondents' recall of expectations was biased by subsequent performance and satisfaction. The test for this type of bias is the linear independence of expectations from disconfirmation and satisfaction. The test of hypothesis H1 (Chapter V) indicates a linear relationship between the expectation and disconfirmation measures. This finding suggests the presence of a halo effect where some consumers may

TABLE 4.7

CORRELATIONS BETWEEN EXPECTATION LEVELS AND TIME SINCE PURCHASE

	SPEARMAN COEFFICIENT	SIGNIFICANCE LEVEL
PRE-SEARCH EXPECTATIONS	-.061	.121
PRE-SERVICING EXPECTATIONS	.003	.478

have perceived the expectation scales as evaluation scales. However, there is an alternative explanation for this phenomenon. This explanation, which stems from the nature of the phenomenon investigated (a service and not a product) will be discussed in section 5.2 of the next chapter. In addition, the test of hypothesis H2 (see Chapter V) shows that the relationship between satisfaction and expectation levels at both stages of the buying process is curvilinear. This finding adds some confidence in the expectation measures used.

Earlier parts of this chapter discussed the use of three blocking factors in the selection of the sample. While the first two factors (location and gender of the respondent) affect the representativeness of the sample and, thus, the external validity of the study, the third factor (origin of car) influences the validity of the intervening constructs. Discussion with car dealers had revealed that in some instances, different practices were adopted in the sales of domestic cars compared to imported cars. For example, price negotiation is encouraged mainly by domestic car dealers, especially in the large automobile category. Therefore, the intervening varia-

ble scales should reflect these differences. Furthermore, consumers may vary in their expectations about dealers selling these two categories of cars, at least on some of the aspects of car sales and service. The next test investigates the existence of meaningful differences in attribute-specific expectation levels and global expectation measures across car origins.

Table 4.8 summarizes the mean expectation levels by car origin at the search stage. Only four of the eleven attributes significantly differed across the car origins. Buyers of imported cars had somewhat lower expectations regarding 1) the dealership location and hours of operation, 2) the possibility of price negotiation, 3) the price offered for the trade-in car and 4) the amount of pressure selling. The first difference is a reflection that there are fewer imported car dealerships relative to domestic ones. The second and third differences are both related to the marketing variable price. This result is explained by the smaller size of imported cars relative to North American cars which normally provide greater margins to the dealer. The fourth difference was unexpected. It may indicate a perception by consumers of a more aggressive approach to advertising and personal selling by domestic car dealers and manufacturers. This perception can possibly be explained by the recent arrival on the marketplace of several new imported makes which stimulates the domestic car manufacturers and dealers to react strongly.

The lack of significant differences regarding the other attributes

TABLE 4.8

MEAN PRE-SEARCH EXPECTATION LEVELS BY ATTRIBUTE AND ORIGIN OF CAR

	DOMESTIC CARS	IMPORTED CARS	T-TEST PROB.
DEALERSHIP LOCATION	4.1674	3.9590	.057
CHOICE OF MODELS	3.8264	3.6860	.288
PRICE NEGOTIATION	3.4417	3.1138	.015
PRICE OF TRADE-IN CAR	2.5922	2.2766	.059
KNOWLEDGE OF PRODUCT	4.0697	3.9280	.189
KNOWLEDGE OF REPAIR	3.6441	3.5537	.487
KNOWLEDGE OF COMPETITION	3.2089	3.2417	.787
RESPECT SHOWN	4.1612	4.2381	.499
WILLINGNESS TO LISTEN	4.0287	4.0081	.868
PRESSURE-SELLING	3.1417	2.7073	.007
TEST DRIVE OFFERED	4.2810	4.4508	.140
PRE-SEARCH EXPECTATIONS	14.529	14.301	.536

is a good sign. Indeed, these attributes represent dimensions of the purchasing stage which a priori should be the same for all categories of car. They pertain mainly to the quality of service offered by the salespeople. Furthermore, these items are not related to any of the different practices mentioned during the visits to car dealers (see section 4.2).

Consistent with the previous finding that consumers perceived some differences in only four of the eleven expectation items, a comparison of the means of the global measure of pre-search expectations did not indicate any significant difference between the two car categories. In summary, Table 4.8 shows that the pattern of attribute-specific pre-search expectations across car origins differs significantly on those items which reflect real differences in practice between imported and domestic car dealerships. This finding adds weight to the validity of the pre-search expectation measure.

The same examination was performed on the attribute-specific expectations at the servicing stage. Table 4.9 displays the mean pre-servicing expectation levels by car origins. Most of the 18 attributes are not significantly different (at the .05 level) across car origins. The exceptions are (1) repair done when promised, (2) alternative transportation offered, and (3) adequate waiting room. In each case, buyers of domestic cars had higher expectation levels, relative to those of imported cars.

It is hard to say whether these differences in expectations reflect

TABLE 4.9

MEAN PRE-SERVICING EXPECTATION LEVELS BY ATTRIBUTE AND ORIGIN OF CAR

	DOMESTIC CARS	IMPORTED CARS	T-TEST PROB.
FOLLOW-UP AFTER SALE	3.6176	3.5950	.852
DELIVERY TIME	3.9429	3.8175	.331
QUALITY OF CAR PREPARATION	4.1911	4.2677	.481
WILLINGNESS TO SOLVE PROBLEMS	4.0697	3.9606	.351
RANGE OF SERVICES	4.0979	4.1349	.746
QUALITY OF REPAIR	4.0750	3.8492	.067
QUALITY OF EXPLANATION	3.8276	3.6311	.137
COST OF DEALER WORK	3.5787	3.4103	.237
AVAILABILITY OF PARTS	4.0667	3.9113	.173
APPOINTMENT TIME	4.1079	3.9593	.187
WARRANTY HONOURED	4.5537	4.4262	.140
FOLLOW-UP AFTER REPAIR	3.5939	3.3983	.188
REPAIR DONE FIRST TIME	4.0043	4.0083	.973
REPAIR DONE WHEN PROMISED	4.2708	4.0417	.032
COST ESTIMATES	4.0000	3.9237	.524
RETURN OF DEFECTIVE PARTS	2.9847	2.8000	.295
ALTERNATIVE TRANSPORTATION	3.3289	2.8421	.005
WAITING ROOM	4.0673	3.6518	.003
PRE-SERVICING EXPECTATIONS	17.449	16.868	.172

realities in the marketplace since this aspect was not empirically investigated in this study. One factor however, argues for the validity of the pre-servicing expectation construct. At the time of the data collection (1981), the severe shortage of some imported car models which we now (1984-1985) observe, did not exist. Consumers did not have to endure long waiting periods before taking delivery of their new imported cars. Therefore, it is a good sign that the respondents did not exhibit any significant differences in their expectation levels regarding the delivery time attribute. Furthermore, no specific differences were mentioned during earlier visits to car dealers regarding automobile servicing, which may indicate that servicing practices do not differ across car origin.

Finally, like the pre-search expectations, there is no significant difference in the global pre-servicing expectation means between the two groups. This finding is consistent with the previous result of no significant differences at the attribute-specific level for 15 of the 18 expectation items.

Disconfirmation - The validation procedure for the two disconfirmation constructs includes the following steps. Firstly, the attribute-specific means across the car origins were examined. Secondly, correlations were calculated between the global disconfirmation measures and a single score reflecting overall feelings of disconfirmation. In addition, the post-servicing global disconfirmation measure was compared to the number of trips made to dealers for repair and maintenance service.

The first test compared the means of the attribute-specific disconfirmation items across car origin. Disconfirmation represents an evaluation by consumers resulting from a comparison they make between current perception of performance relative to what they expected. Therefore, this test investigates if performance perceptions varied according to origin of car.

Table 4.10 displays the attribute-specific post-search disconfirmation means by origin of car. Four of the eleven items differed significantly (at the .05 level) between the car categories. These items are : (1) price negotiation, (2) price of trade-in car, (3) knowledge of product, and (4) willingness to listen. Furthermore, for 10 of the 11 attributes, buyers of imported cars felt they received relatively less than expected compared to buyers of domestic cars. A t-test performed on the global post-search disconfirmation measure confirms this situation. The results of the t-test indicate a significant difference between the two groups of buyers. The conclusion, therefore, is that the disconfirmation scores at this stage reflect some real ability among consumers to accurately discriminate on an attribute-specific basis.

Table 4.11 shows the attribute-specific post-servicing disconfirmation means by car origin. The t-test indicates no significant difference between the two groups. The same test, applied to the global post-servicing disconfirmation measure, confirms the absence of significant differences. The interpretation of this last result

TABLE 4.10

MEAN POST-SEARCH DISCONFIRMATION LEVELS BY ATTRIBUTE AND ORIGIN OF CAR

	DOMESTIC CARS	IMPORTED CARS	T-TEST PROB.
DEALERSHIP LOCATION	.0747	.0160	.302
CHOICE OF MODELS	-.1405	-.1032	.617
PRICE NEGOTIATION	-.1029	-.3095	.011
PRICE OF TRADE-IN CAR	-.1472	-.3838	.044
KNOWLEDGE OF PRODUCT	.1548	-.0084	.020
KNOWLEDGE OF REPAIR	-.0383	-.1488	.125
KNOWLEDGE OF COMPETITION	-.0683	-.1624	.198
RESPECT SHOWN	.3195	.1825	.104
WILLINGNESS TO LISTEN	.2314	.0565	.022
PRESSURE-SELLING	.1733	.0400	.167
TEST-DRIVE OFFERED	.2155	.2080	.929
POST-SEARCH DISCONFIRMATION	.315	-.161	.009

TABLE 4.11

MEAN POST-SERVICING DISCONFIRMATION LEVELS BY ATTRIBUTE AND ORIGIN OF CAR

	DOMESTIC CARS	IMPORTED CARS	T-TEST PROB.
FOLLOW-UP AFTER SALE	.0261	-.0667	.284
DELIVERY TIME	.0983	.1901	.338
QUALITY OF CAR PREPARATION	.0690	.0887	.832
WILLINGNESS TO SOLVE PROBLEMS	.1348	.1271	.932
RANGE OF SERVICES	.0685	.1667	.172
QUALITY OF REPAIR	-.1267	.0000	.146
QUALITY OF EXPLANATION	-.0524	-.0357	.845
COST OF DEALER WORK	-.0546	-.0505	.963
AVAILABILITY OF PARTS	-.1422	-.0089	.102
APPOINTMENT TIME	.2271	.3277	.278
WARRANTY HONOURED	.1339	.1000	.679
FOLLOW-UP AFTER REPAIR	-.1457	-.1875	.643
REPAIR DONE FIRST TIME	-.2318	-.1468	.402
REPAIR DONE WHEN PROMISED	-.0183	.1376	.082
COST ESTIMATES	-.0113	.1020	.159
RETURN OF DEFECTIVE PARTS	-.2450	-.2000	.651
ALTERNATIVE TRANSPORTATION	-.0973	-.2604	.191
WAITING ROOM	.0512	-.1414	.061
POST-SERVICING DISCONFIRMATION	-.041	.104	.580

is not easy. Table 4.9 showed very few significant differences between the two groups in terms of the attribute-specific expectations at this stage. The fact that similar results were found for the post-servicing disconfirmation attributes may very well mean that consumers do not perceive differences in the services offered by domestic and imported car dealers. In addition, the discussion with car dealers prior to the data collection had revealed different practices only in terms of how the cars are sold, and not in terms of how they are serviced. The consistency between the dealers' observation and the results of this test provides a reasonable argument in favour of the post-servicing disconfirmation construct validity.

The second validity test for the disconfirmation measures consisted of correlating the aggregated disconfirmation scores with a single scale used to capture overall feelings of disconfirmation. Spearman rank correlation between post-search disconfirmation and this measure (Appendix A, Q18) is .581, while Pearson correlation is .634. Both correlations are significant at the .001 level. This result indicates that the global post-search disconfirmation measure captures the overall feeling of disconfirmation expressed by consumers following their search for a new automobile.

Spearman rank correlation between post-servicing disconfirmation and this single measure (Appendix A, Q28) is .702 and Pearson correlation is .736. Both correlations were significant at the .001 level pointing to the conclusion that the global disconfirmation

measure captured the overall feelings of disconfirmation felt by consumers at the servicing stage.

The final validity test consisted of correlating the post-servicing disconfirmation measure with the number of times consumers had to go to their dealers for servicing of their new car (Appendix A, Q36). It is likely that the higher this number, the more negative the disconfirmation experienced, since there would be more opportunities for a dealer not to meet the consumer's expectations. The results obtained confirm this relationship. Spearman correlation is -.1845 and Pearson correlation is -.1920. Both results are statistically significant at the .001 level, and thus provide further support to the validity of the post-servicing disconfirmation variable.

Consumer Satisfaction - The last series of tests investigates the validity of the post-search and post-servicing satisfaction variables. Two tests were performed which involved the global satisfaction measures. First, parametric and non-parametric correlations were calculated between each of the constructs and a single score measuring consumer overall satisfaction feelings with the dealer(s). This single score is measured by Q20 (Appendix A) for the search stage and by Q30 (Appendix A) for the servicing stage. Table 4.12 presents the test results. At both stages, the correlations are above .7 and statistically significant at the .001 level. Therefore, it appears that the global satisfaction measure captures consumer overall feelings of satisfaction with the dealer(s) at both stages

TABLE 4.12

CORRELATIONS BETWEEN SINGLE OVERALL MEASURE AND SATISFACTION SCALES

	SPEARMAN COEFFICIENT	PEARSON COEFFICIENT
POST-SEARCH SATISFACTION	.736 (.001)*	.717 (.000)
POST-SERVICING SATISFACTION	.810 (.001)	.808 (.000)

*Significance levels are shown in parentheses.

of the buying process.

As a second test, a comparison was made between the satisfaction constructs and some items which did not directly measure consumer satisfaction but should, "a priori" correlate with satisfaction. The results of Table 4.13 reveal a positive and significant relationship between satisfaction and the level of trustworthiness perceived by consumers regarding their car dealers (Q21 and Q33, Appendix A). It also shows the existence of a negative and significant relationship between post-servicing satisfaction and the number of warranty trips consumers have made so far (Q36, Appendix A). These results add to the validity of the satisfaction constructs.

In summary, the conclusion in so far as is possible at this stage, is that the measures employed demonstrated reasonable construct validity. These measures were thus judged to be appropriate for use in further analyses.

TABLE 4.13

CORRELATIONS BETWEEN SATISFACTION SCALES AND SINGLE ITEM MEASURES

	SPEARMAN COEFFICIENT	PEARSON COEFFICIENT
POST-SEARCH SATISFACTION AND TRUSTWORTHINESS OF DEALERS	.487 (.001)*	.498 (.000)
POST-SERVICING SATISFACTION AND TRUSTWORTHINESS OF MY DEALER	.685 (.001)	.681 (.000)
POST-SERVICING SATISFACTION AND NUMBER OF WARRANTY TRIPS	-.304 (.001)	-.310 (.000)

*Significance levels are shown in parentheses

Conclusion - This chapter dealt with the methodology adopted in this study. It described the data collection procedure used and the sample obtained. It also discussed the reliability and validity of the dependent and intervening variables used. The next two chapters deal with the testing of the formal hypotheses.

CHAPTER V

SOME DETERMINANTS OF CONSUMER SATISFACTION

This chapter and the next present the results of the tests of the hypotheses. The first six hypotheses concentrate on the relationships among the dependent and the intervening variables and these are the focus of this chapter. Hypotheses sets H7 to H12 concentrate on the relationships between the intervening and the independent variables. Chapter VI analyzes these relationships.

Section one of this chapter discusses some methodological points which impact on the data analysis. Section two focusses on the relationship between consumer expectations and disconfirmation. Sections three to six examine the relationships among satisfaction, expectations and disconfirmation at the search and servicing stages of the buying process. Next, section seven investigates the effect of three different kinds of satisfaction on overall satisfaction with the distribution system. Finally, the last section summarizes the major findings and points out the theoretical implications of these findings.

5.1 METHODOLOGICAL CONSIDERATIONS

Before discussing the hypotheses, two methodological issues must be dealt with. First, hypotheses H1 to H6 were tested with a pooled sample which did not separate the owners of imported and domestic cars. This decision was made after it was discovered that the depen-

dent and intervening variable interrelationships were consistent across the two car origins. All respondents were therefore treated as members of a single population. Since the purpose of hypotheses H1 to H6 is to discover generalized underlying relationships, the treatment of the sample as a single population should not be a problem and it will also help to simplify the presentation of the results. However, car origin will be taken into consideration when testing hypothesis sets H7 to H12, the subject of Chapter VI.

The second methodological consideration concerns the choice of the statistical tests used in this study. All the dependent and intervening variables and several of the independent variables were measured using ordinal scales. Furthermore, the dependent variable and three of the six intervening variables severely departed from normality (Ref. Table 4.5). Therefore, non-parametric tests such as Spearman Rank Correlations, were more appropriate for testing the formal hypotheses. But since parametric techniques are generally more powerful than non-parametric ones, Blalock's (1979) suggestion that the data be analyzed with both parametric and non-parametric tests was followed. Thus, whenever the analysis required the calculation of correlations, both Spearman Rank and Pearson correlations were obtained.

For the most part, these two tests gave similar results and led to the same conclusions. In these cases, only Pearson correlations are reported in the body of the text. Appendix C displays the corresponding Spearman Rank correlations. On two occasions (Ref. Tables

5.2 and 5.6), the correlations obtained were of different signs. But since neither of these two correlations was significant at the .05 level, the conclusions did not differ and therefore the discussion focussed only on the Pearson correlations.

In addition, two of the correlations between expectations and disconfirmation at the servicing stage had the same sign but different significance levels (Ref. Tables 5.1 and 5.2). This difference has a more serious consequence for it leads to different conclusions. Nunnally (1978) suggests a possible explanation for the difference in significance levels. He indicates that three assumptions must be met when using the product-moment coefficient for two continuous variables. These conditions are that the relationship between the two variables must be linear, each of the variables must be normally distributed and the relationship must be homoscedastic. Nunnally states that "to the extent to which any of the three assumptions is not met and consequently bivariate-normality is not precisely obtained, probability statements about the correlations might not be exactly correct" (p. 139). He further mentions that this situation is not a great problem unless one of the assumptions is seriously violated.

Table 4.5 shows that while pre-servicing expectations has a normal distribution, the distribution of post-servicing disconfirmation levels severely departs from normality. This distribution is positively skewed and highly peaked. When the distributions of the two correlated variables differ from one another in a pronounced

way, Nunnally argues that the size of the product-moment correlation coefficient can be affected. Given what is known of the distributions of the expectations and disconfirmation variables at the servicing stage, Spearman Rank correlation, the non-parametric test, is used to interpret the results at this stage (Ref. Tables 5.1 and 5.2).

5.2 TEST OF HYPOTHESIS H1

Hypothesis H1: Disconfirmation is independent of expectations held by consumers.

(a) Post-search disconfirmation is independent of pre-search expectations.

(b) Post-servicing disconfirmation is independent of pre-servicing expectations.

Table 5.1 shows that the correlation between pre-search expectations and post-search disconfirmation is .2751 and is highly significant. This result indicates a positive relationship between these two measures. Similarly, the correlation between pre-servicing expectations and post-servicing disconfirmation is .1070, and is significant at the .02 level. This correlation, although small, also indicates the presence of a positive relationship between the two constructs. At both stages, therefore, consumers with higher expectations tend to experience more positive disconfirmation levels. In other words, the hypothesis that expectations and subsequent levels of disconfirmation are independent of each other, has to be rejected, at both stages of the buying process.

TABLE 5.1

CORRELATIONS BETWEEN EXPECTATIONS AND DISCONFIRMATION

	CORRELATION COEFFICIENT	SIGNIFICANCE LEVEL
SEARCH STAGE	.2751*	.000
SERVICING STAGE	.1070**	.022

*Pearson coefficient ** Spearman Rank coefficient

This finding is difficult to explain. Several empirical studies support the independence of expectations and subsequent levels of disconfirmation (Oliver 1977, 1980; Thirkell, 1980). As in this research, these studies use summary judgmental scales (better than expected - worse than expected) to measure disconfirmation. Other studies (Prakash and Lounsbury, 1983; Oliver 1977) report significant and negative correlations between expectations and disconfirmation. However, their result may have been an outcome of the disconfirmation measures used, the difference score approach, which involves computation of the discrepancy between expectations and postpurchase performance outcomes. The study by Churchill and Surprenant (1982) shows a positive but not significant correlation between expectations and disconfirmation for a video disc player and a small negative and significant correlation between expectations and disconfirmation for a plant. The result in this case may have been influenced by the manipulation of consumer expectations as part of the research design.

One possible explanation for the significant relationship between expectations and disconfirmation in this study may be the existence of a halo effect resulting from response-bias. Some respondents might not have clearly remembered their expectations and maybe tended to recall them as positive when their feeling of disconfirmation was also positive. However, Thirkell's study on consumer satisfaction with new automobiles, suggests a competing explanation for this result. His three dependent measures included four submeasures which each dealt with a different aspect of the constructs investigated. These submeasures are performance benefits, social benefits, support costs and efforts and system response. Thirkell found that when he correlated overall expectation levels with overall disconfirmation levels, these two measures were independent of one another. However, when he took into consideration the four submeasures, he found some support for the independence between expectation and disconfirmation levels for only three of the four submeasures. The exception was the social benefits and costs submeasure for which there was a positive and statistically significant relationship.

A look at the subset attributes used by Thirkell for each submeasure reveals that most of them are objective, in the sense that they are external to the individual, for example fuel economy, noise level and maintenance costs. However, the two attributes utilized to form the social benefits and costs submeasure, popularity with family and with friends, are subjective in nature as they deal with the individuals' perception of their relationship with others. An examination of the attributes used in the present study reveals

some similarities with the social benefits and costs attributes used by Thirkell, in that several of them are subjective. Indeed, six of the eleven attributes at the search stage deal with the knowledge salespeople have of different aspects related to their job, the respect they show to customers, their willingness to listen to customers, and the amount of pressure-selling felt. These attributes are subjective since they all involve an interaction between customers and salespeople and are therefore affected by the behaviour of the customers themselves. For example, a customer who expects the salesperson to know a lot about the competitors' products, may ask more pertinent questions, thus providing an opportunity for the salesperson to display his knowledge of the products on the market. Subsequently, this consumer may leave the showroom with a feeling of positive disconfirmation regarding that particular attribute.

Similarly, a few of the servicing attributes such as repair people's willingness to act on complaints and solve problems and the quality of explanation of work to be done, are also subjective in nature. Furthermore, one of the aspects which distinguish products from services is that services generally require an input from the customer, the customer is part of the production process. For example, in the case of car repairs there is a greater likelihood that servicing people will repair the car quickly and do it right the first time if the consumers initially give a good description of what is wrong with the car. It is therefore plausible and even logical to think that in the case of services, or when the attributes used to evaluate

the product or service are subjective in nature, in the sense that they involve an interaction with other people, there could be a positive relationship between expectation and disconfirmation levels. Indeed in these cases, since the attribute(s) performance is not necessarily independent of the individual's behaviour, it is reasonable to believe that disconfirmation levels will be directly influenced by prior expectations.

In a sense what is happening is the self-fulfilling prophecy. If an individual expects little of someone or something, and if behaviour can affect the performance of the person or object, then unconsciously the individual's behaviour can be such as to cause the object to perform in a manner consistent with initial expectations. The net result may be a perception of the disconfirmation level in the direction of the initial expectations. In other words, if a consumer has high expectations, then the consumer's behaviour may cause the object or person to demonstrate a very good performance. Subsequently, this consumer may even overrate the actual performance level and perceive it or recall it as being better than expected, or in other words, the consumer will experience some positive disconfirmation. The theoretical implications of this finding will be discussed in Chapter VII.

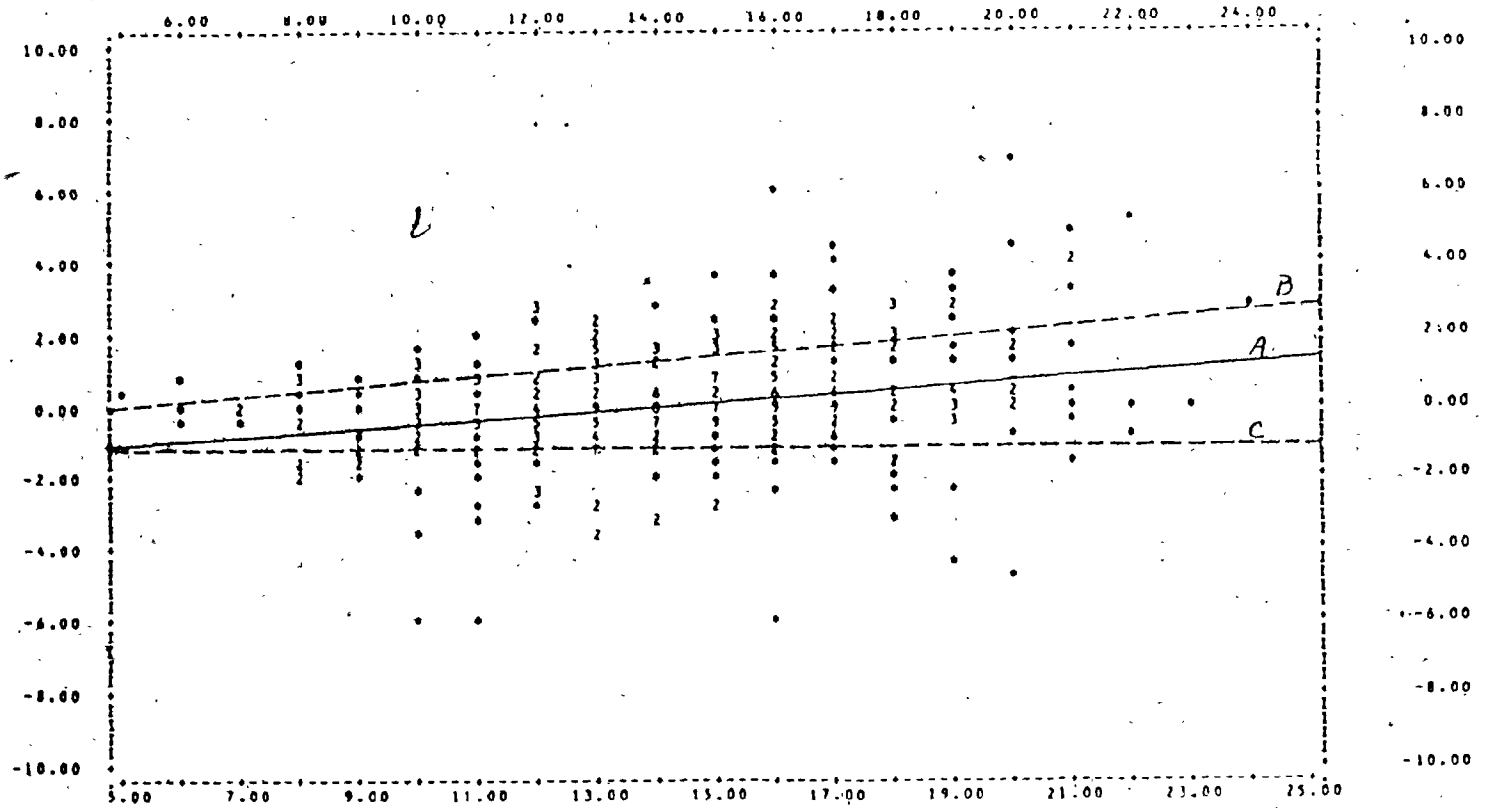
In addition to this first test, a series of steps were performed to check if expectation levels are related to the magnitude of disconfirmation experienced, a relationship which could not be observed with the simple correlations obtained so far.

First, a plot was made between these two variables at the two stages of the buying process (Figures 5.1 and 5.2). The solid line (line A) in the middle of each figure represents the single regression line obtained for both buying stages (The details of the two regressions can be found in Appendix D, Table I). This line is almost horizontal at the servicing stage, as can be expected from the very small correlation obtained at this stage. On the other hand, the search regression line has a slight angle which reflects the small correlation of .2751 previously obtained. A careful examination of the two plots indicates the following tendency: the distribution of disconfirmation seems to spread with increasing levels of expectations while still remaining symmetrical around the disconfirmation mean.

The objective of the second step of the analysis was to empirically test this observation. To reach this goal, the two expectation measures were categorized into twenty-one individual groups. These groups were formed by rounding the expectation scores to the nearest integer. For example, all those with expectations between 4.500 and 5.499 were put into group one, those between 5.500 and 6.499 were put into group two, and so on. Then, a Bartlett-Box F test was performed across the twenty-one expectation groups, for each one of the buying stages. This test confirmed that the variance in both post-search and post-servicing disconfirmation for each group significantly differed. The plots in Figures 5.3 and 5.4 show the pattern of this variability. These figures demonstrate that the disconfirmation distributions are symmetrical at diffe-

FIGURE 5.1 PLOT OF CONSUMER EXPECTATIONS AND DISCONFIRMATION -SEARCH STAGE

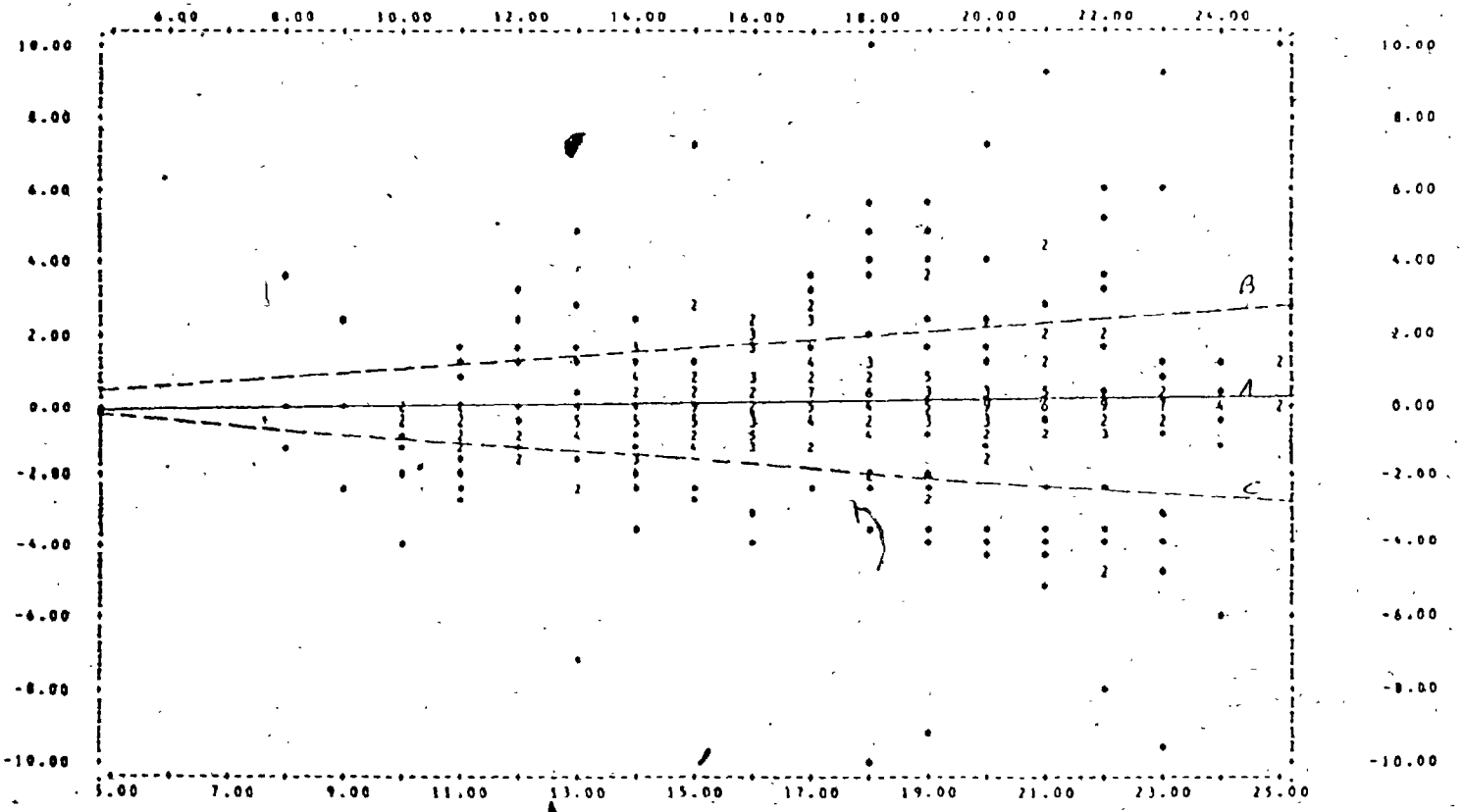
(DOWN) POST-SEARCH DISCONFIRMATION (ACROSS) PRE-SEARCH EXPECTATIONS



A: Regression line - Total sample
B: Regression line - Among positive disconfirmation
C: Regression line - Among negative disconfirmation.

FIGURE 5.2 PLOT OF CONSUMER EXPECTATIONS AND DISCONFIRMATION -SERVICING STAGE

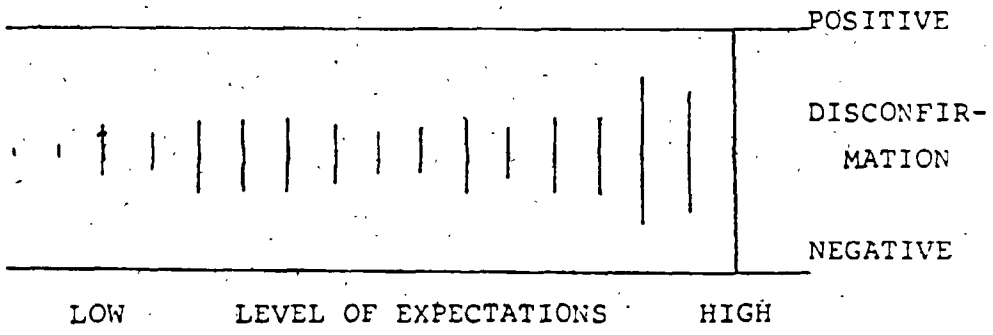
(DOWN) POST-SERVICING DISCONFIRMATION (ACROSS) PRE-SERVICING EXPECTATIONS



A: Regression line - Total sample
B: Regression line - Among positive disconfirmation
C: Regression line - Among negative disconfirmation

FIGURE 5.3

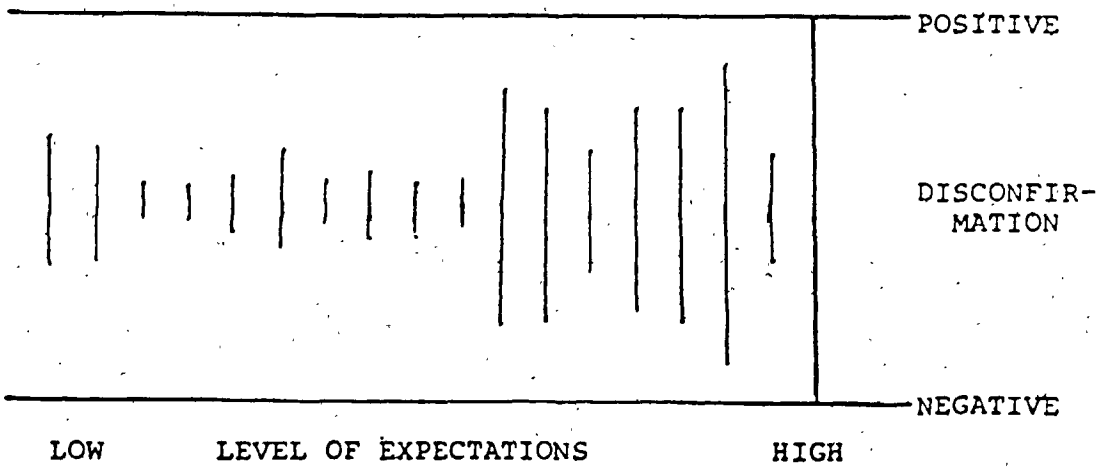
POST-SEARCH DISCONFIRMATION VARIANCES
BY LEVEL OF EXPECTATIONS



Bartlett-Box F test= 2.458 (P = 0.001)

FIGURE 5.4

POST-SERVICING DISCONFIRMATION VARIANCES
BY LEVEL OF EXPECTATIONS



Bartlett-Box F test= 4.703 (P = 0.000)

ring levels of expectations. Furthermore, they confirm the increasing magnitude of reported disconfirmation with higher expectations.

Step 3 extended the investigation even further. This extension took the form of a simple regression between expectations and those reporting positive disconfirmation only, followed by a regression between expectations and those reporting negative disconfirmation only. This procedure was followed at both stages of the process (The details of the regressions are shown in Appendix D, Tables 2 and 3). These regression lines are represented by the dashed lines (lines B and C) in Figures 5.1 and 5.2. In addition, correlations were calculated between expectations and disconfirmation, again separating those who reported negative and positive disconfirmation. Of these correlations, shown in Table 5.2, two are significant at the .01 level and two are not (the correlation among the negative disconfirmation group at the search stage, and the correlation among the positive disconfirmation group at the servicing stage).

On the basis of these tests, the general tendency seems to be that the higher the initial expectations, the more extreme the feelings of disconfirmation experienced by consumers. Thus, among those who felt positive disconfirmation, higher levels of expectations appear to generate, in a linear fashion, greater feelings of disconfirmation. A similar but opposite phenomenon is observed among consumers reporting negative disconfirmation.

TABLE 5.2

RELATIONSHIP BETWEEN EXPECTATIONS AND DISCONFIRMATION FOR POSITIVE AND NEGATIVE DISCONFIRMATION GROUPS

	PEARSON CORRELATIONS	
	POSITIVE DISCONFIRMATION	NEGATIVE DISCONFIRMATION
SEARCH STAGE	.3916 (.000)*	-.0088 (.457)
SERVICING STAGE	.0849** (.155)	-.3005 (.000)

* Significance levels are shown in parentheses.

** Spearman Rank coefficient

In summary, the preceding analyses lead to the following conclusions for the two stages of the buying process investigated. First, the findings allow the rejection of the hypothesis; that is, expectations and disconfirmation are not independent of one another. Indeed, a positive relationship was found between expectation and disconfirmation levels among the total group of respondents for the two stages of the buying process. However, taking into account the direction of the disconfirmation gave a different result. Among those reporting positive disconfirmation, the magnitude of reported disconfirmation increased linearly with higher expectations. Similarly, among those reporting negative disconfirmation, higher expectation levels generated greater feelings of disconfirmation.

5.3 TEST OF HYPOTHESIS H2

Hypothesis H2: There is a curvilinear relationship between levels of satisfaction and levels of expectations.

a) There is a curvilinear relationship between levels of post-search satisfaction with the dealers/stores selling a product and levels of pre-search expectations.

b) There is a curvilinear relationship between levels of post-servicing satisfaction with the dealers/stores servicing a product and levels of pre-servicing expectations.

This hypothesis states that among people with higher expectations, there are more extreme feelings of satisfaction or dissatisfaction. The form of this relationship corresponds to that of Figure 5.5.

As a first test, simple correlations were calculated between the expectations and the satisfaction variables. At the search stage, the Pearson correlation between expectations and satisfaction is .4088, which is significant at the .001 level. Similarly, at the servicing stage, the Pearson correlation between the two measures is .2672, which is also significant at the .001 level (Table 5.3). These two findings indicate that at both stages, levels of satisfaction vary directly with increasing levels of expectations. However, it should be emphasized that a large percentage of respondents reported being satisfied to a certain extent with the dealers they visited during the search (75 percent) and/or with the dealer servicing their new car (71 percent). It was believed that

FIGURE 5.5

EXPECTATIONS SATISFACTION HYPOTHESISED RELATIONSHIP

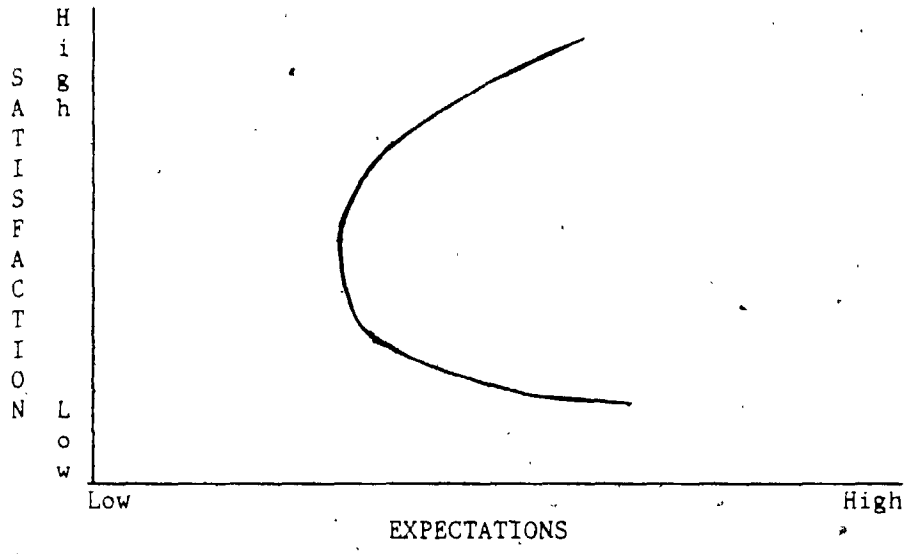


TABLE 5.3

CORRELATIONS BETWEEN EXPECTATION AND SATISFACTION LEVELS

	PEARSON COEFF.	SIGNIFICANCE LEVELS
SEARCH STAGE	.4088	(.000)
SERVICING STAGE	.2672	(.000)

this factor could have masked the existence of a reverse relationship among those respondents reporting some dissatisfaction. Therefore the procedure suggested by Thirkell (1980) was adopted where two regressions were run between expectations and a quadratic form of

satisfaction. In these regressions, expectations was considered the dependent variable even if temporally it precedes satisfaction. Table 5.4 displays the result of these two regressions.

At the search stage, the 'satisfaction squared' beta, with an associated t value of 8.722, accounted for 16.9 percent of the variance of the model. The simple satisfaction measure, which was not statistically significant in the final equation, accounted for, if substituted for the 'satisfaction squared' measure, 16.5 percent of the variance. This result is almost as good as the final equation selected. In other words, the relationship between pre-search expectations and post-search satisfaction is not completely linear though it is close to linear (refer to the graphical representation of Figure 5.6), but it does not conform to what was hypothesised. There seems to be a slight curvilinear relationship between expectations and satisfaction at the search stage. But that relationship is such that the higher their expectation levels, the more satisfied consumers feel.

At the servicing stage, both the satisfaction and the 'satisfaction squared' measures were retained in the equation. The 'satisfaction squared' beta, with an associated t value of 6.169, increased the explained variance of the simple linear model by over 129 percent. The graphic representation of the empirical relationship obtained is displayed in Figure 5.7. This relationship conforms to what was initially expected. That is, the model provides for more extreme feelings of satisfaction or dissatisfaction among consumers with

TABLE 5.4

TEST OF HYPOTHESIS H2: STEPWISE REGRESSION

Dependent variable : Expectations
Independent variables: Satisfaction, Quadratic form of satisfaction

SEARCH STAGE

MULTIPLE R	0.41343
R SQUARE	0.17093
ADJUSTED R SQUARE	0.16868
STANDARD ERROR	3.06301

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	713.73576	713.73576
RESIDUAL	369	3461.97034	9.38203

F = 76.07474 SIGN F = 0.0000

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
(SATISF.)	0.25331	0.02904	0.41343	8.722	0.0000
(CONSTANT)	10.96882	0.42910		25.562	0.0000

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	MIN TOLER	T	SIG T
SATISFACT.	-0.05404	-0.00794	0.01788	-0.152	0.8791

SERVICING STAGE

MULTIPLE R	0.40310
R SQUARE	0.16249
ADJUSTED R SQUARE	0.15771
STANDARD ERROR	3.52594

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	2	844.23016	422.11508
RESIDUAL	350	4351.28536	12.43224

F = 33.95325 SIGN F = 0.0000

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
(SATISF.)	1.23260	0.19979	2.10137	6.169	0.0000
SATISF.	-7.78824	1.46374	-1.81234	-5.321	0.0000
(CONSTANT)	28.13901	2.59316		10.851	0.0000

FIGURE 5.6

EXPECTATIONS SATISFACTION RELATIONSHIP -SEARCH STAGE

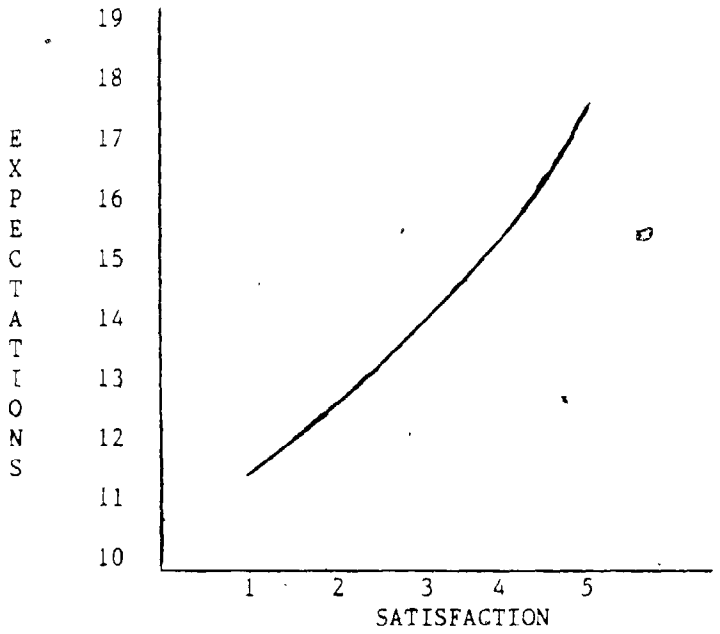
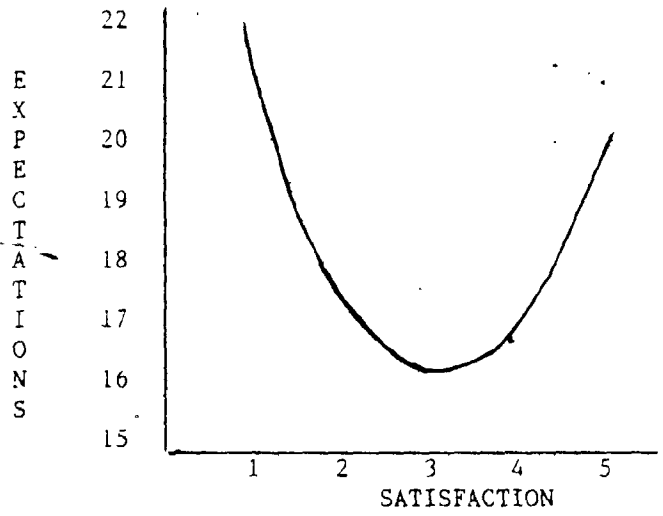


FIGURE 5.7

EXPECTATIONS SATISFACTION RELATIONSHIP -SERVICING STAGE



higher expectations.

The previous test suggests the existence of a curvilinear relationship between expectations and satisfaction but it presents a theoretical problem. This test assumed that expectations was the dependent variable while the research framework assumes that satisfaction is the dependent variable. Therefore, an additional test was performed which is more in line with the theoretical model being explored in this study. This test consisted of running separate regressions among the satisfied and the dissatisfied consumer groups. The results are presented in Table 5.5.

This table confirms that among satisfied consumers, expectation levels are positively correlated with satisfaction levels. Among dissatisfied consumers, the relationship varies depending on the buying stage. At the search stage, expectations are independent of satisfaction (Figure 5.8) while at the servicing stage, higher expectations are associated with more dissatisfaction (Figure 5.9). These results thus indicate that the difference between the two forms of relationship can be attributed to a different relationship, at the two stages, between the expectation and the satisfaction measures among the dissatisfied consumer group.

In summary, the results support the second hypothesis which states that there is a curvilinear relationship between consumer expectations and satisfaction. However, the form of this relationship varies depending on the stage of the buying process. At the search

TABLE 5.5

REGRESSION BETWEEN EXPECTATIONS AND SATISFACTION

Dependent variable : Satisfaction
Independent variable : Expectations

SEARCH STAGE

		SATISFIED CONSUMERS	DISSATISFIED CONSUMERS
MULTIPLE R		.37215	
R SQUARE		.13850	
ADJUSTED R SQUARE		.13541	
STANDARD ERROR		.52855	
F		44.85	
SIGNIF F		.0000	N/S**
EXPECTATIONS	B	.06557	
	T	2.94950*	
(CONSTANT)	B	6.697	
	T	19.673*	

* T significant at the .0000 level.
** Not significant at the .01 level.

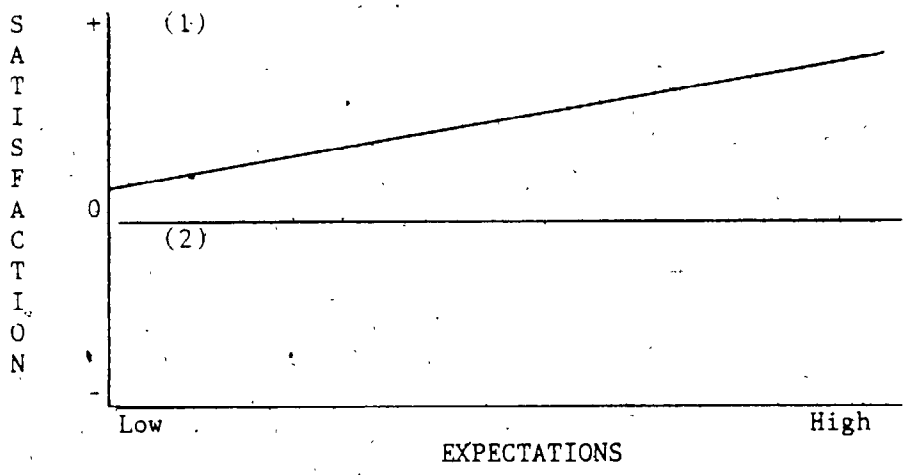
SERVICING STAGE

		SATISFIED CONSUMERS	DISSATISFIED CONSUMERS
MULTIPLE R		.37420	.40174
R SQUARE		.14003	.16139
ADJUSTED R SQUARE		.13680	.14787
STANDARD ERROR		.60139	.41924
F		43.31	11.93
SIGNIF F		.0000	.0010
EXPECTATIONS	B	.06666	-.04255
	T	6.581**	- 3.454**
(CONSTANT)	B	2.94608	3.15541
	T	16.166**	15.009*

* Significant at the .0000 level.
** Significant at the .0010 level.

FIGURE 5.8

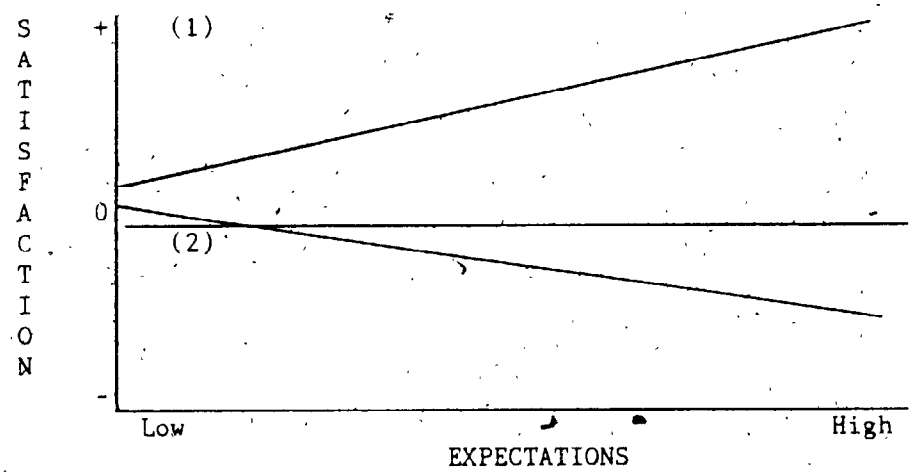
REGRESSION BETWEEN SATISFACTION AND EXPECTATIONS
SEARCH STAGE



(1) Satisfied consumers
(2) Dissatisfied consumers

FIGURE 5.9

REGRESSION BETWEEN SATISFACTION AND EXPECTATIONS
SERVICING STAGE



(1) Satisfied consumers
(2) Dissatisfied consumers

stage, higher expectation levels are associated with more consumer satisfaction. At the servicing stage, there are more extreme feelings of satisfaction or dissatisfaction among consumers who report higher expectation levels.

5.4 TEST OF HYPOTHESIS H3

Hypothesis H3: Levels of satisfaction vary directly with increasing negative to positive levels of disconfirmation.

(a) Levels of post-search satisfaction with the stores/dealers selling a product vary directly with negative to positive levels of post-search disconfirmation.

(b) Levels of post-search satisfaction with the stores/dealers servicing a product vary directly with negative to positive levels of post-servicing disconfirmation.

Table 5.6 provides strong support for this hypothesis. At both the search and servicing stages, satisfaction and disconfirmation are positively and significantly (at the .001 level) related. Other tests were performed, to check if a non-linear model would do a better job in describing the relationship between these two variables. The results indicate that the linear model is the most powerful one. Thus, the null hypothesis that disconfirmation and satisfaction are independent is rejected. The relationship between these variables was found to be strong, positive and linear. This result holds at the two stages of the buying process.

These results are not surprising. Indeed, in this study satisfaction is seen as the result of an internal comparison between expecta-

TABLE 5.6

CORRELATIONS BETWEEN SATISFACTION AND DISCONFIRMATION

	PEARSON COEFF.	SIGNIFICANCE LEVEL
SEARCH STAGE	.5705	.000
SERVICING STAGE	.5841	.000

tions and actual performance. When the perceived performance is not as good as the prior expectations, negative disconfirmation occurs, stirring some feelings of dissatisfaction. Similarly, when the perceived performance exceeds prior expectations, positive disconfirmation occurs, stimulating feelings of satisfaction in the consumer. Consequently, as the magnitude of negative disconfirmation decreases, so does consumer dissatisfaction; when the magnitude of positive disconfirmation increases, consumer satisfaction also increases.

5.5 TESTS OF HYPOTHESIS H4

While hypotheses H2 and H3 focussed on the relationships between pairs of intervening variables, hypotheses H4 and H5 concern the simultaneous effect of expectations and disconfirmation on satisfaction. Hypothesis H4 looks at this interrelationship at the search stage while Hypothesis H5 examines it at the servicing stage.

Hypothesis H4: Levels of post-search satisfaction with the stores/dealers selling a product vary directly with:

(a) increasing levels of pre-search expectations and

(b) increasing negative to positive levels of post-search disconfirmation.

This series of tests investigates the simultaneous effect of expectations and disconfirmation on satisfaction, including the interaction effect if any. Given the earlier results obtained during the testing of hypothesis two, the first analysis was performed on the total sample, without separating it into satisfied and dissatisfied consumers.

Table 5.7 shows the result of a multiple regression performed. The independent variables entering the stepwise procedure were pre-search expectations, post-search disconfirmation and the corresponding interaction term. The correlation found, in the testing of hypothesis one, between the expectations and disconfirmation measures was quite low. Therefore, multicollinearity was not considered to be a problem in running this regression.

The results confirm the previous analyses. They indicate the existence of a relationship between consumer expectations, disconfirmation and the subsequent feeling of satisfaction experienced. They also indicate the presence of an interaction effect between the disconfirmation and expectation measures. Adding this interaction effect increases the variance explained by the model from 38.9 percent to 45.0 percent. The positive signs of the expectation and

TABLE 5.7

TEST OF HYPOTHESIS H4: STEPWISE REGRESSION

Dependent variable : Post-search satisfaction

Independent variables: Pre-search expectations
Post-search disconfirmation
Interaction term (Exp*Disc)

MULTIPLE R	0.67431
R SQUARE	0.45470
ADJUSTED R SQUARE	0.44965
STANDARD ERROR	0.53057

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	3	76.05428	25.35143
RESIDUAL	324	91.20904	0.28151

F = 90.05535 SIGNIF F = 0.0000

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
DISCONFIRMATION	0.40428	0.07454	0.99212	5.423	0.0000
EXPECTATIONS	0.04671	0.00936	0.21564	4.992	0.0000
(EXP*DISC)	-0.01091	0.00469	-0.42785	-2.326	0.0207
CONSTANT)	2.87433	0.13560		21.197	0.0000

disconfirmation betas indicate that levels of satisfaction increase as a direct function of both levels of expectations and levels of disconfirmation. This result is consistent with previous results. Consequently the null hypothesis that post-search satisfaction is independent of prior consumer expectations and subsequent levels of disconfirmation was rejected.

The second step focussed on another phenomenon, the existence of

'zones of indifference' or 'tolerance regions'. This analysis investigated the association between expectations and disconfirmation within separate groups of satisfied and dissatisfied consumers. Figure 5.10 shows a plot of consumer expectations and levels of disconfirmation among satisfied consumers. This plot indicates that even if consumers experience some amount of negative disconfirmation, a substantial number of respondents still report being to a certain extent satisfied with the car dealers visited during their search for a new automobile. Figure 5.11 presents the same association among dissatisfied consumers. As we can see, almost all the respondents report negative disconfirmation. The few exceptions experience only marginal amounts of positive disconfirmation.

This finding provides evidence for the existence of 'tolerance regions', at least with respect to negative disconfirmation. Thus, consumers who give favourable search evaluations tend to translate them into feelings of satisfaction. On the other hand, not all consumers who report some amount of negative disconfirmation feel dissatisfied. Apparently, some consumers are prepared to absorb some unfavourable evaluations before voicing them in terms of dissatisfaction. Even if this phenomenon does not apply to all consumers, the results still support the existence of consumer 'tolerance regions', at least at this stage of the process.

5.6 TEST OF HYPOTHESIS H5

Hypothesis H5: Levels of post-servicing satisfaction with the store/dealer servicing a product vary directly with:

FIGURE 5.10

SATISFIED CONSUMER EXPECTATIONS AND DISCONFIRMATION -SEARCH STAGE

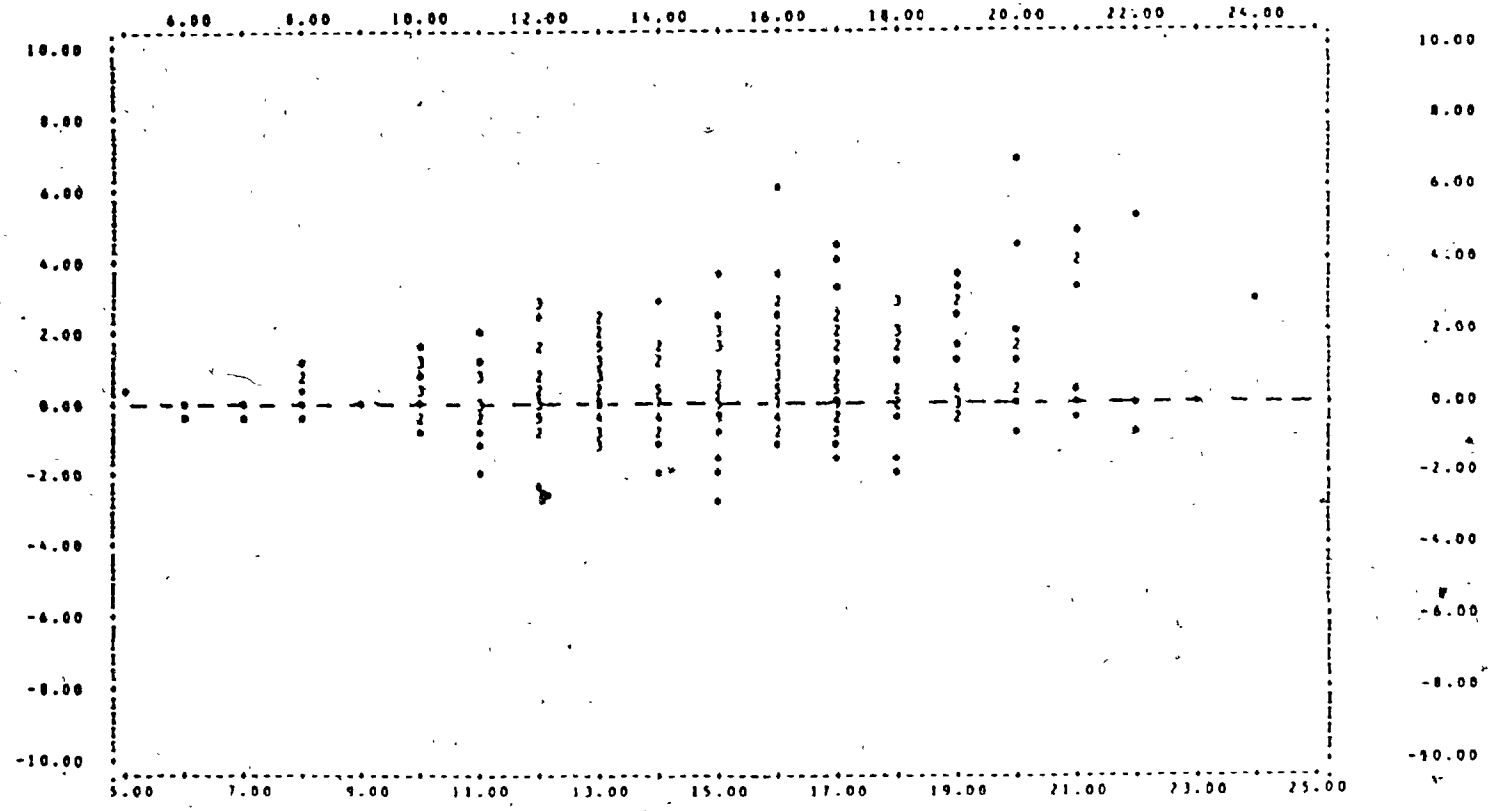
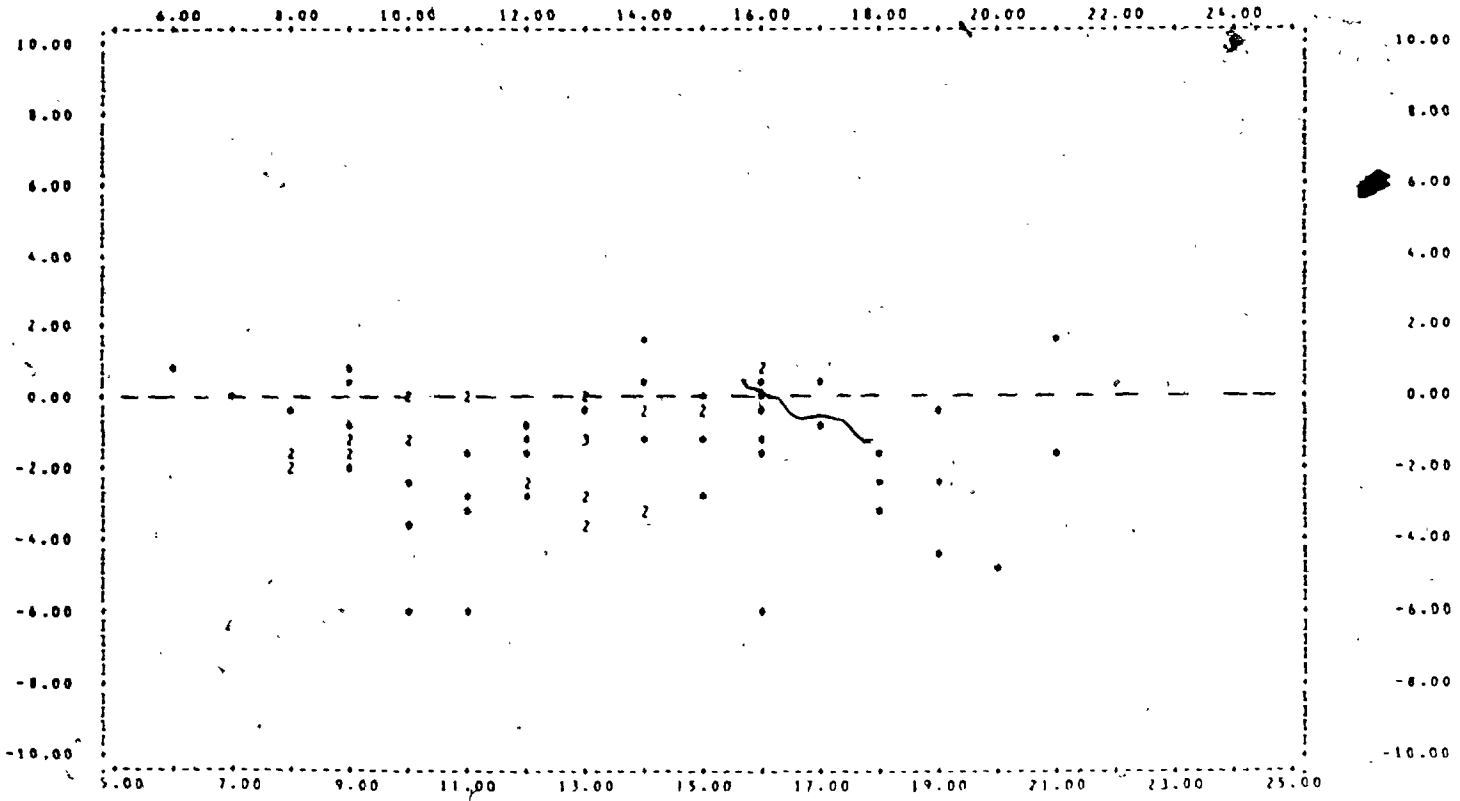


FIGURE 5.11

DISSATISFIED CONSUMER EXPECTATIONS AND DISCONFIRMATION -SEARCH STAGE

(DOWN) POST-SEARCH DISCONFIRMATION (ACROSS) PRE-SEARCH EXPECTATIONS



(1) increasing levels of pre-servicing expectations and

(2) increasing negative to positive levels of post-servicing disconfirmation.

This hypothesis investigates the simultaneous effect on servicing satisfaction of consumer expectations and disconfirmation, as well as the corresponding interaction term if any. Given the results obtained in the testing of the second hypothesis, the sample was separated into two groups, the satisfied and the dissatisfied consumers, in order to perform the analyses.

The first step consisted of running some stepwise regressions, with post-servicing satisfaction as the dependent variable. Table 5.8 presents the results of the regression performed among the satisfied consumers. As expected from the previous analyses, pre-servicing expectations has a positive effect on post-servicing satisfaction.

Another, not so expected, result is the lack of significant effect of the disconfirmation measure on its own. However, this does not mean that this variable does not have any impact at all. Apparently, its effect is captured by the interaction term which, according to Table 5.8, has the greatest impact. By itself, this interaction term accounts for over 75 percent of the explanatory power of the model. The signs of the different betas indicate that the effect of both expectations and disconfirmation is positive. This result is consistent with previous findings. Therefore, the results confirm that among satisfied consumers, levels of servicing satisfaction increase as a direct function of levels of expectations and subse-

TABLE 5.8

TEST OF HYPOTHESIS H5: STEPWISE REGRESSION

Dependent variable : Post-servicing satisfaction

Independent variable: Pre-servicing expectations
Post-servicing disconfirmation
Interaction term (Exp*Disc)

SATISFIED CONSUMERS

MULTIPLE R	0.51140
R SQUARE	0.26153
ADJUSTED R SQUARE	0.25443
STANDARD ERROR	0.54809

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	2	22.12873	11.06436
RESIDUAL	208	62.48329	0.30040

F = 36.83205 SIGN F = 0.0000

----------VARIABLES IN THE EQUATION----------

VARIABLE	B	SE B	BETA	T	SIG T
(EXP*DISC)	0.00559	0.8900E-03	0.38485	6.275	0.0000
EXPECTATIONS	0.04567	0.01086	0.25778	4.203	0.0000
(CONSTANT)	3.15577	0.18813		16.775	0.0000

----------VARIABLES NOT IN THE EQUATION----------

VARIABLE	BETA IN	PARTIAL	MIN TOLER	T	SIG T
DISCONFIRM.	0.39250	0.08771	0.03599	1.267	0.2066

quent disconfirmation.

Table 5.9 gives the result of the stepwise regression among dissatisfied consumers. For this group of consumers, the only mea-

TABLE 5.9

TEST OF HYPOTHESIS H5: STEPWISE REGRESSION

Dependent variable : Post-servicing satisfaction

Independent variable: Pre-servicing expectations
Post-servicing disconfirmation
Interaction term (Exp*Disc)

DISSATISFIED CONSUMERS

MULTIPLE R	0.76780
R SQUARE	0.58952
ADJUSTED R SQUARE	0.58268
STANDARD ERROR	0.28312

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	6.90735	6.90735
RESIDUAL	60	4.80951	0.08016

F = 86.17104 SIGN F = 0.0000

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
(EXP*DISC)	0.00709	0.7639E-03	0.76780	9.283	0.0000
(CONSTANT)	2.80384	0.05096		55.024	0.0000

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	MIN TOLER	T	SIG T
EXPECTATIONS	0.16772	0.18945	0.52374	1.482	0.1436
DISCONFIRM.	-0.39369	-0.13859	0.05087	-1.075	0.2868

sure retained in the final equation is the interaction term. By itself, this measure explains 58.3 percent of the variance in servicing satisfaction. The signs of the expectation and disconfirmation betas seem to contradict the results obtained in section 5.2 and 5.3. However, this apparent contradiction can be explained by the

presence of the interaction effect between expectations and disconfirmation. Indeed, if we remove the interaction term from the regression equation, we find (1) that disconfirmation is the only measure retained in the model, (2) that this measure explains by itself 40 percent of the variance in satisfaction, (3) that it has a direct effect on satisfaction and (4), that the sign of the expectation beta is negative. Therefore, this last set of results indicates that among dissatisfied consumers, levels of satisfaction can best be explained by the interaction of expectations and disconfirmation. However, this effect is such that levels of satisfaction increase with increasing negative to positive disconfirmation, and decrease with higher levels of expectations.

To summarize, these results are consistent with earlier findings that levels of servicing satisfaction increase as a direct function of levels of disconfirmation while the magnitude of reported satisfaction or dissatisfaction increases linearly with higher expectation levels. Consequently, the results allow us to reject the null hypothesis that overall satisfaction is independent of prior expectations and subsequent levels of disconfirmation.

The next step of the analysis consists of verifying the existence of the 'tolerance regions'. As in the previous section, this involved an examination of the association between expectation and disconfirmation levels among satisfied and dissatisfied consumers.

The plot of Figure 5.12 shows that even if they experience some

negative disconfirmation, a fair number of consumers still feel to a certain extent satisfied with their servicing experience at a car dealer. On the other hand, the second plot (Figure 5.13) indicates that almost all the consumers who expressed some dissatisfaction, evaluated their servicing experience as being negative. The few exceptions reported only marginal amounts of positive disconfirmation.

These two plots thus confirm the existence of 'tolerance regions'. As in the case of the search stage, this 'tolerance region' applies mainly to negative disconfirmation and not to all consumers.

5.7 TEST OF HYPOTHESIS H6

Hypothesis H6: Levels of overall satisfaction with the distribution system of a product vary directly with:

(1) levels of post-search satisfaction with the stores/dealers selling the product.

(2) levels of post-servicing satisfaction with the store/dealer servicing the product.

(3) levels of satisfaction with the product performance.

This hypothesis investigates the effect on overall satisfaction with the distribution system of a product, of the feelings felt by consumers towards each component of that system. Therefore, the analysis includes as independent variables, both post-search and post-servicing satisfaction, as well as product performance satisfaction. This last variable was included since it is belie-

FIGURE 5.12

SATISFIED CONSUMER EXPECTATIONS AND DISCONFIRMATION -SERVICING STAGE

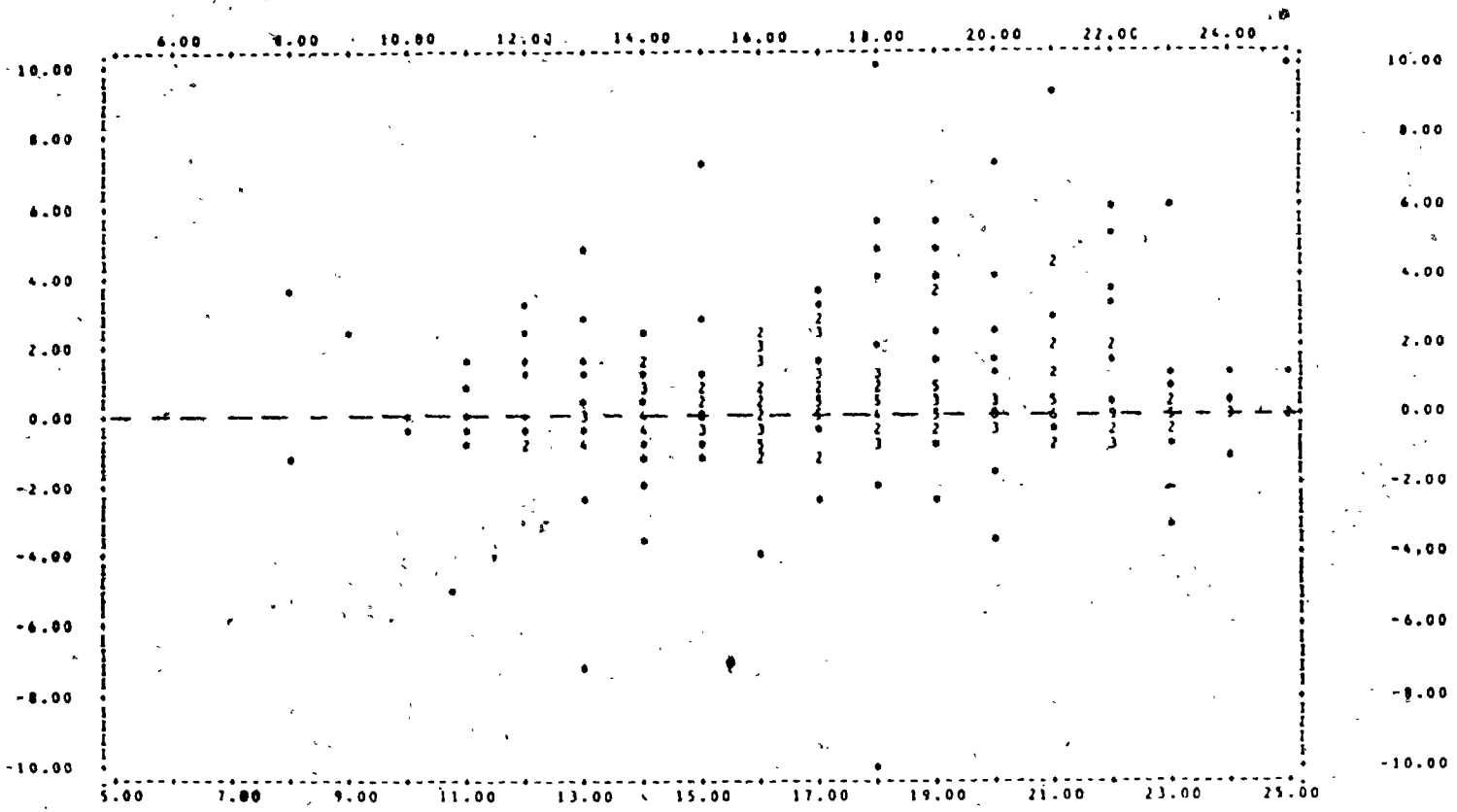
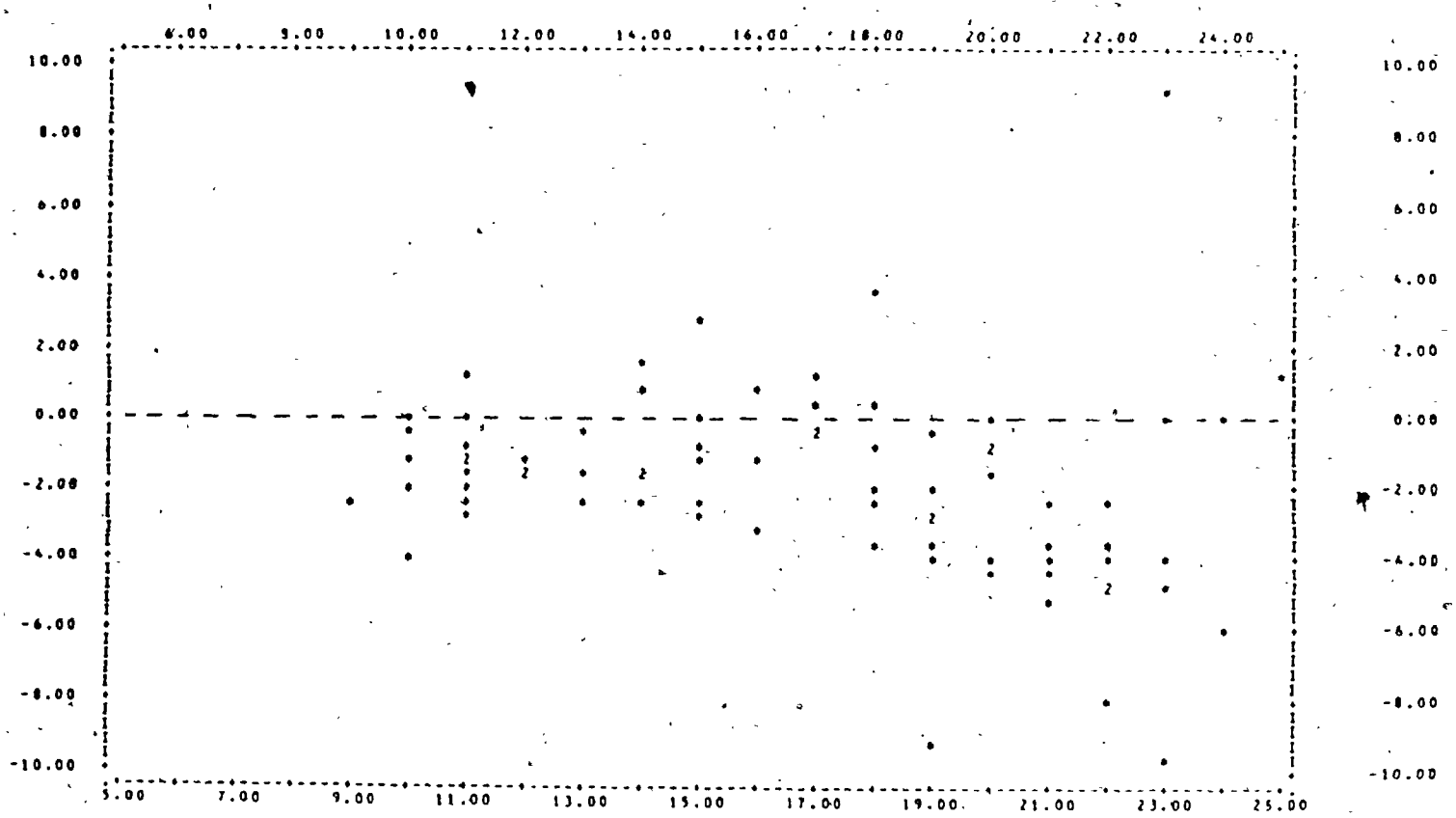


FIGURE 5.13

DISSATISFIED CONSUMER EXPECTATIONS AND DISCONFIRMATION -SERVICING STAGE



ved that when consumers evaluate the performance of stores or dealers, they are influenced by their evaluation of the products sold in these stores.

Table 5.10 presents the Pearson correlations for the three independent measures. The variable which has the closest relationship with overall satisfaction is post-servicing satisfaction, with a correlation of .7508, followed by post-search satisfaction (.4882) and product performance satisfaction (.4266). The three correlation coefficients are significant at the .001 level and are all positive.

Thus, these results suggest that how consumers feel about the distribution system of a durable product such as an automobile is mostly influenced by their evaluation of the store/dealer servicing that product. This result makes sense for two reasons. First, most consumers who buy such a durable product have it serviced during its warranty period. Therefore, they become increasingly familiar with the particular dealer where they bought the product. Thus, they can probably evaluate that dealer with more confidence, a factor which might later be reflected in their overall evaluation of the distribution system.

Secondly, the evaluation of the post-servicing experience comes after the search stage. Thus, it is more recent in consumers' mind. This factor probably makes it more likely that consumers, when asked to evaluate their overall satisfaction with the distribution system, can better remember what happened at that later stage and conse-

TABLE 5.10

CORRELATIONS BETWEEN OVERALL SATISFACTION WITH THE DISTRIBUTION SYSTEM AND THE OTHER SATISFACTION MEASURES

	PEARSON COEFF.	SIGNIFICANCE LEVEL
POST-SEARCH SATISFACTION	.4882	.000
POST-SERVICING SATISFACTION	.7508	.000
PRODUCT PERFORMANCE SATISFACTION	.4266	.000

quently, are more influenced by their evaluation of it.

Overall satisfaction with the distribution system is also substantially influenced by post-search satisfaction. Apparently, the feelings consumers have about the stores or dealers they visited during their search to buy a product is taken into consideration when consumers later evaluate the total experience of doing business with that set of stores or dealers including the specific outlet where they bought the product. However, this influence is not as pronounced as it is with the servicing stage of the process.

Finally, the finding that overall satisfaction and product performance satisfaction are positively correlated gives some support to the hypothesis that consumers' evaluation of the products sold by a store influence their perception of the whole distribution system for these products. That is, if consumers are dissatisfied with the performance of a product, they might extend their dissatis-

faction to the store itself, blaming it for a poor quality control or a bad choice of suppliers. This phenomenon is probably more pronounced when the consumers do not have any direct contact with the manufacturer and must rely on the retailer for repairing and servicing the product, as is the case for automobiles. This last finding has some managerial implications which will be discussed in the last chapter of this study.

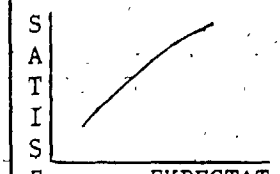
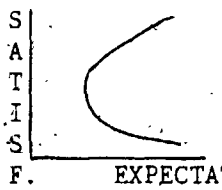
In summary, the satisfaction that consumers feel about each component of the distribution system of a product is reflected in their overall evaluation of that system. The most important source of influence is post-servicing satisfaction, followed by post-search satisfaction and then, by product performance satisfaction.

5.8 DEPENDENT AND INTERVENING VARIABLE INTERRELATIONSHIPS SUMMARIZED

This section draws together the results obtained so far. Table 5.11 summarizes the findings between pairs of dependent and intervening variables and compares these findings with the initial hypotheses. All but two of the hypothesized relationships were supported during the empirical analysis. The two exceptions, the positive correlation between expectations and disconfirmation at both stages of the buying process, can possibly be explained by the subjective nature of the attributes used to evaluate the two stages and the fact that consumers evaluate services and not products. Therefore, the dependent and intervening variable interrelationships of the research model displayed in Figure 3.1 are by and large sustained

TABLE 5.11

DEPENDENT AND INTERVENING VARIABLE INTERRELATIONSHIPS SUMMARIZED

HYPOTHESISED RELATIONSHIP	SEARCH STAGE HYPOTHESIS CONFIRMED	SEARCH STAGE CORR.	SERVICING STAGE HYPOTHESIS CONFIRMED	SERVICING STAGE CORR.
H1 EXPECTATIONS AND DISCONFIRMATION INDEPENDENT	NO	.2751 (.000)	NO	.1070 (.022)
H2 CURVILINEAR RELATIONSHIP BETWEEN EXPECTATIONS AND SATISFACTION	YES	SATISF CONS. .3722 (.000) DISSAT CONS. .0567 (.320) 	YES	SATISF CONS. .3742 (.000) DISSAT CONS. -.4017 (.001) 
H3 DISCONFIRMATION AND SATISFACTION: POSITIVE CORR	YES	.5705 (.000)	YES	.5841 (.000)
H6 POST-SEARCH SATISFACTION POST-SERVICING SATISFACTION PRODUCT PERFORMANCE SATISFACTION AND OVERALL SATISFACTION: POSITIVE CORR	YES	POST-SEARCH SATISF. .4882 (.000) POST-SERVICING SAT. .7508 (.000) PRODUCT PERF. SAT. .4266 (.000)		

* Significance levels are in parentheses

by the data.

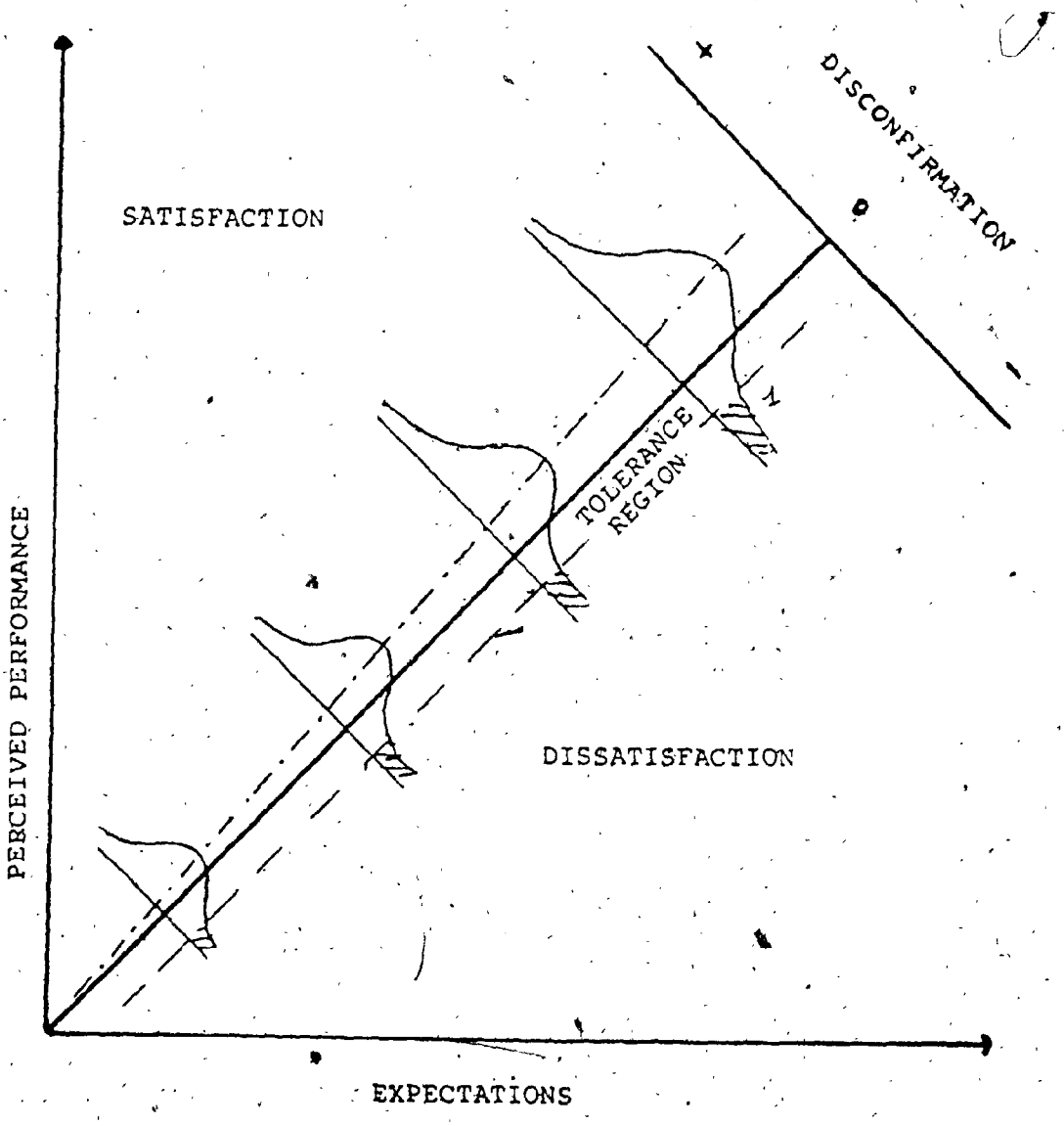
The research model described in Chapter III was not tested in its entirety in this study. Among other things, the relationships among expectations regarding product performance, the subsequent disconfirmation levels and the resulting product satisfaction were taken for granted, based on an automobile study performed by Thirkell in 1980. In addition, perception about the dealer(s)' performance was assumed to be a function of prior expectations. This notion had received empirical support from earlier studies.

The rest of this section puts together all the findings obtained so far, for both stages of the buying process. The interrelationships are summarized in Figure 5.14. The 45 degree line between expectations and perceived performance represents the functional relationship between the two, all other things being equal. The four disconfirmation distributions overlaid upon this line symbolize the relationship existing between mean disconfirmation levels and expectation levels. These distributions show the increases in the magnitude of disconfirmation over the expectations range. The dotted line above the 45 degree line with its positive slope symbolizes the positive relationship found between disconfirmation and expectation levels.

The analyses show that satisfaction is a function of the level of disconfirmation. Where perceived performance exceeds consumer expectations, then the magnitude of felt satisfaction increases

FIGURE 5.14

OBSERVED DEPENDENT AND INTERVENING VARIABLE INTERRELATIONSHIPS



(1) The cross-hatched area indicates dissatisfaction.

with the level of prior expectations held. However, where perceived performance does not meet prior expectations, then whether or not dissatisfaction results depends upon the consumer's tolerance towards such negative disconfirmation. If the disconfirmation is large enough to fall outside the tolerance region (the region between the 45 degree line and the lowest dotted line), then dissatisfaction occurs. At the search stage, dissatisfaction is independent of the level of prior expectations held while at the servicing stage, it increases as a direct function of expectation levels.

These findings have some interesting implications for marketers, public policymakers and CS/D theory. These implications will be discussed in Chapter VII. The next chapter, Chapter VI, deals with the testing of hypothesis set's H7 to H12. These hypotheses focus on the determinants of both expectation and disconfirmation levels.

CHAPTER VI

CORRELATES OF CONSUMER EXPECTATIONS AND DISCONFIRMATION

This part of the research has three objectives. The first is to identify how consumers' personal characteristics as well as their past experience in buying and using a product influence their level of pre-search expectations about the stores or retail outlets selling the desired product. The second objective concerns the extent to which the amount and kind of prepurchase search undertaken by consumers, their personal characteristics and their prior experience with the product, impact on their pre-servicing expectations about the store or dealer servicing the product during the warranty period. Hypothesis sets seven to nine focus on these relationships. Hypothesis sets ten to twelve cover the final objective. This objective concerns the impact of the three sets of independent variables mentioned above on both the search and servicing levels of disconfirmation experienced by consumers.

The perceived importance of these independent variables stems from their potential as a source of expectations. It is believed that these variables impact on disconfirmation regardless of the level of expectations. In other words, even if consumers hold similar levels of expectations, the level of subsequent disconfirmation can vary across consumers whose expectations stem from different sources.

The assumption made from the beginning of this study was that both

the car's origin (domestic or imported) and the consumers' gender affected their expectation and disconfirmation levels. Car dealers visited during the preparatory phase of this research suggested the first variable. These dealers mentioned that their marketing practices varied depending on the origin of the car. For example, because of the import quotas set by the federal government, imported cars were in short supply relative to demand. Consequently, dealers of these cars tended to do less price negotiation with their clients. Also, quite often the buyers of new imported cars had to wait several weeks for the delivery of their car. Furthermore, they frequently did not receive their first choice regarding the colour of the new car. It was assumed that consumers were aware of this situation and that their levels of expectations and any subsequent disconfirmation of these expectations reflected this awareness.

The impact of the variable gender arises from the nature of the product purchased. An increasing number of women are now buying cars - women currently account for about 30 percent of the market. But this phenomenon is recent and, relative to men, most women still tend to have less knowledge of or experience with the purchasing and servicing of a car. Also, it is conceivable that women have different criteria relative to men with respect to choosing a dealer and/or a car. The expectation, therefore, was that the level of pre-search and pre-servicing expectations as well as the corresponding level of disconfirmation reflected these gender based differences. Thus the impact of the variables car origin and gender on

levels of expectations and disconfirmation was investigated through an analysis of covariance prior to the formal testing of hypotheses seven to twelve.

The procedure used during this phase of the analysis follows that described by Thirkell (1980). It includes three steps.

1) Run stepwise regressions within the car origins by gender cells, to identify the significant independent measures within each cell. The .05 significance level was used as the selection cutoff.

2) Combine all the independent variables emerging as significant in at least one of the car origin by gender cells into a single common model. Evaluate how the common model-effects upon the expectations and disconfirmation intervening measures varied across car origins and by principal driver gender. This was the formal analysis of covariance, and was used to define how the testing of hypotheses seven to twelve could best be structured.

3) Estimate the relative impacts of the chosen independent measures upon the intervening variables. This was the formal testing of hypothesis sets seven to nine and ten to twelve respectively.

In the past, several studies attempted to define the correlates of consumer expectations and disconfirmation. The results obtained differed from one study to another. One possible explanation for this situation is that the correlates probably differed according to the product used. Since this is one of the few studies investigating the search and servicing stages of the buying process, this part of the analysis can be considered as exploratory in nature. As indicated in Tables 3.4 and 3.5, many of the relationships existing between the independent and intervening measures are still unclear. This analysis tries to clarify some of them, at least as regards the purchase of a new car. Therefore, even if the relationships investigated in this chapter were stated in the hypothesis

form, they should be considered more as research questions than formal hypotheses. Finally, it should be noted that the theoretical model ignores any interrelationships which may exist among the independent variables.

6.1 METHODOLOGICAL CONSIDERATIONS

Before giving the results of the statistical analysis, it is worth mentioning two factors that affected the methodology. The first is the failure of the stepwise regression in Step 3 of the previously described procedure, as a method for analyzing the six hypotheses. Step 3 of the data analysis was performed by running four stepwise regressions using the independent variables obtained during the first two steps of the procedure. Following the procedure described by Green and Tull (1978), a double cross-validation was then performed on the regression equations. Unfortunately, cross validation indicated that some of the independent variables' beta coefficients were unstable across replications. Furthermore, one of the equations did not pass the F Test in the first half of the sample. Consequently, the stepwise regression method was replaced by Spearman Rank correlations.

This non-parametric correlational test was judged more appropriate since several of the variables (both independent and intervening) were measured using ordinal scales. Unfortunately, using a bivariate test does not provide the richness of information provided by stepwise regression analysis. Indeed, with Spearman Rank correlations

it is not possible to check for the simultaneous impact of several independent variables over the two sets of intervening variables. This is therefore a limitation of this part of the analysis.

The results obtained in the four stepwise regressions can be found in Appendices E and F. These results are consistent with those obtained from the Spearman Rank correlations, except that the latter technique displays a higher number of significant relationships between the intervening and independent variables than the regressions. This finding is not surprising since the correlations cannot control for the common variance attributable to pairs of independent variables. Despite this weakness, Spearman Rank correlation is still a useful technique, given the exploratory nature of this part of the study, since it gives an indication of the direction and magnitude of the relationships among the independent and intervening variables.

The second methodological consideration deals with the critical region used for testing the different hypotheses. Where the hypotheses specified the relationship between two variables, one-tailed statistical tests with a significance level of .05 were used. Where no direction was hypothesised or where no statistically significant relationship was expected, a two-tailed test was used. The rest of the chapter discusses the formal testing of hypotheses seven to twelve.

6.2 CONSUMER EXPECTATIONS: ANALYSIS OF COVARIANCE

This section discusses the use of Analysis of Covariance as a guide to structuring the tests of hypothesis sets seven to nine. These hypotheses deal with the relationships between the independent variables and consumer expectations.

Table 6.1 displays the two models obtained from the series of stepwise regressions performed within each car origin by gender cell. These regressions helped to identify the independent variables entering the covariance analysis. Of the nine independent variables which entered into the pre-search expectations regression, three were statistically significant in at least one of the car origin by gender cells: age, satisfaction with last owned car and generalized market beliefs. Similarly, of the nineteen independent variables which entered into the pre-servicing expectation model, only six variables were significant: age, personal income, market beliefs, satisfaction with last owned car, personal independent variety and personal advocate depth. These were therefore retained to form the pre-servicing expectations model.

Following the pre-established procedure, two analyses of covariance were then performed, using gender and car origin as covariates. To circumvent the problem of unequal cell sizes, Lin and White's (1968) covariance analysis procedure was adopted. Instead of looking at the simultaneous effect of the continuous variables and the covariates as is done in traditional covariance analysis, Lin and White's

TABLE 6.1

EXPECTATION MODELS

PRE-SEARCH EXPECTATIONS\3 VARIABLE MODEL

Age
Satisfaction with last owned car
Market beliefs

PRE-SERVICING EXPECTATIONS 6 VARIABLE MODEL

Age
Income
Market beliefs
Satisfaction with last owned car
Personal independent variety
Personal advocate depth

procedure consists of examining the effect of different variables step by step by running a series of regressions using dummy variables. In this procedure, the effect of the continuous variables is first examined (Row 1, Tables 6.2 and 6.3). Then the impact of the first covariate, car origin, is examined with the help of a dummy variable (Rows 2 and 3, Tables 6.2 and 6.3), followed by an examination of the impact of the second covariate, gender (Rows 4 and 5, Tables 6.2 and 6.3). Putting each step into the equation form can help clarify the various steps involved. Table 6.2 will be used as an example.

Step 1: $EXP = f(I_1, I_2, I_3)$

Step 2: $EXP = f(I_1, I_2, I_3, O)$

Step 3: $EXP = f(I_1, I_2, I_3, O, I_1O, I_2O, I_3O)$

Step 4: $EXP = f(I_1, I_2, I_3, O, I_1O, I_2O, I_3O, OS)$

Step 5: $EXP = f(I_1, I_2, I_3, O, I_1O, I_2O, I_3O, OS, I_1S, I_2S, I_3S,$

TABLE 6.2

PRE-SEARCH EXPECTATIONS ANALYSIS OF COVARIANCE USING 3 VARIABLE MODEL

DEPENDENT VARIABLE = PRE-SEARCH EXPECTATIONS

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	112.0	3	37.3	2.6	3.52	.025
Different ori. cell intrcpts	IND+ORIGIN	.6	1	.6	2.7	.06	--
Different ori. cell slopes	IND*ORIGIN	55.9	3	18.6	4.0	1.76	--
Diff. gender cell intrcpts	IND+GENDER*ORIG	70.4	1	70.4	5.6	6.64	.01
Diff: gender cell slopes	IND*GENDER*ORIG	228.9	6	38.1	11.1	3.60	.01
	TOTAL EXPLAINED	467.7	14	33.4	11.1	3.16	.01
	RESIDUAL	3762.9	355	10.6			
	TOTAL	4230.6	369				

TABLE 6.3

PRE-SERVICING EXPECTATIONS ANALYSIS OF COVARIANCE USING 6 VARIABLE MODEL

DEPENDENT VARIABLE = PRE-SERVICING EXPECTATIONS

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	436.9	6	72.8	9.2	5.59	.01
Different ori. cell intrcpts	IND+ORIGIN	.9	1	.9	9.2	.07	--
Different ori. cell slopes	IND*ORIGIN	87.0	6	14.5	11.0	1.11	--
Differ. gender cell intrcpts	IND+GENDER*ORIG	11.4	1	11.4	11.3	.87	--
Differ. gender cell slopes	IND*GENDER*ORIG	439.0	12	36.6	20.5	2.81	.01
	TOTAL EXPLAINED	975.2	26	37.5	20.5	2.88	.01
	RESIDUAL	3788.5	291	13.0			
	TOTAL	4763.7	317				

I_1OS, I_2OS, I_3OS) .

Where: EXP = Expectation levels

I_n = Continuous independent variables

O = Dummy variable car origin

S = Dummy variable gender

OS = Interaction of car origin with gender

I_nO = Interaction of independent variable with car origin

I_nS = Interaction of independent variable with gender

I_nOS = Interaction of independent variable with car origin with gender.

Tables 6.2 and 6.3 show the results of the analyses performed on the two expectation constructs. The most surprising result is the lack of any effect of the variable car origin. As can be seen in the equations, the inclusion of car origin as a dummy variable does not significantly improve the explanatory power of the independent variable models. In both cases, the F ratio obtained was not significant at the .05 level.

Apparently, consumer awareness of the different marketing practices adopted by car dealers is not enough to affect their pre-search and pre-servicing expectations. Or if they are aware of these practices, consumers do not perceive them as being sufficiently different to alter their expectations levels. This second explanation is consistent with the previous finding of no difference in market beliefs between foreign and domestic car buyers. A third possible

explanation for this unexpected result is that the dichotomous measure - imported/domestic cars - may not be sensitive enough to account for differences in business practices. In other words, it is possible that this measure does not do an adequate job of differentiating between the marketing practices of dealers of imported cars and of dealers of domestic cars. The measure used, for example, does not differentiate among the four North-American manufacturers: American Motors, Chrysler, Ford and General Motors (the 'domestic' cars). Neither does it make a distinction between the European cars such as Volvo, Volkswagen and Renault, and the Japanese cars (Toyota, Subaru, Honda and Datsun).

In the automobile industry, most dealerships operate under a franchise system. Thus, the individual dealers have to follow certain policies and marketing practices laid down by the manufacturer whom they represent. For example, financing terms and warranty periods vary depending on the manufacturer. As a result, consumers may have different expectations of the dealers depending on the make of car they are planning to buy. Unfortunately, the sample used in this study did not permit the testing of the hypothesis that car manufacturer is a better measure than car origin in explaining different expectations levels held by consumers. Given the number of variables used in each equation, some of the car manufacturers' buyers are not in sufficient number to perform the three steps of the analysis procedure without running into degrees of freedom problems.

The covariance procedure adopted did not allow for the testing of the effect of the variable gender independently of the measure car origin. Given the finding previously discussed, a second analysis of covariance was performed, this time using gender as the only covariate. Tables 6.4 and 6.5 show the results of the two analyses.

Table 6.4 reveals that the three independent variables which entered the equation explain only 2.65 percent of the variance of pre-search expectations. This result is significant at the .025 level. Allowing for different intercepts according to the gender of the consumer increases considerably the explained variance, from 2.65 to 8.37 percent. However, allowing for different slopes does not contribute significantly to explaining the intervening measure. It thus appears that gender is the principal source of expectation levels at the search stage. Women tend to have different expectations relative to their male counterparts about the kind of service and treatment they are going to receive from dealers while shopping for a new automobile.

Table 6.5 displays the results obtained at the servicing stage of the buying process. This time, the six independent variables entering the equation explain 9.17 percent of the variance in expectation levels. The result is statistically significant at the .01 level. As in the previous equation, adding the dummy variable gender to the model increases its power to 10.87 percent, with a significance level of .025. Again, allowing for different slopes within the gender cells does not make any statistically significant contribution in terms of explaining the variance in pre-servicing expectations.

TABLE 6.4

PRE-SEARCH EXPECTATIONS ANALYSIS OF COVARIANCE USING 3 VARIABLE MODEL

DEPENDENT VARIABLE = PRE-SEARCH EXPECTATIONS

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	112.0	3	37.3	2.65	3.49	.025
Differ. gender cell intrcpts	IND+GENDER	242.0	1	242.0	8.37	22.62	.01
Differ. gender cell slopes	IND*GENDER	4.5	3	1.5	8.47	.14	--
	TOTAL EXPLAINED	358.5	7	51.2	8.47	4.79	.01
	RESIDUAL	3872.1	362	10.7			
	TOTAL	4230.6	369				

TABLE 6.5

PRE-SERVICING EXPECTATIONS ANALYSIS OF COVARIANCE USING 6 VARIABLE MODEL

DEPENDENT VARIABLE = PRE-SERVICING EXPECTATIONS

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	436.9	6	72.8	9.17	5.32	.01
Differ. gender cell intrcpts	IND+GENDER	81.1	1	81.1	10.87	5.92	.025
Differ. gender cell slopes	IND*GENDER	84.2	6	14.0	12.64	1.03	--
	TOTAL EXPLAINED	602.2	13	46.3	12.64	3.38	.01
	RESIDUAL	4161.5	304	13.7			
	TOTAL	4763.7	317				

In summary, the variable gender explains part of the variance in consumer expectation levels at both stages of the buying process. As a consequence, gender was added to the two sets of independent variables used in the formal testing of hypothesis sets seven to nine. Furthermore, given the absence of any effect of the car origin measure on consumer expectations, this variable was ignored in the subsequent analysis. The buyers of the two types of cars were pooled together and the formal testing of hypothesis sets seven to nine was performed on the total sample.

6.3 CONSUMER EXPECTATIONS - TESTS OF HYPOTHESIS SETS H7 TO H9

Step 3 of the procedure consisted of calculating Spearman Rank correlations between the independent variables and both pre-search and pre-servicing expectations. As indicated above, gender was added to the set of independent variables in both cases. Table 6.6 presents the significant correlations between the independent variables and the intervening variables. Table 6.7 displays a comparison between the hypothesized and actual directions of the relationship existing between the independent variables and the two intervening measures, based on the Spearman Rank correlations.

Hypothesis Set H7: Individual characteristics

The initial belief was that six individual characteristics could have an impact on the variable expectations. These characteristics were gender, income, age, market beliefs, perceived risk and specific self-confidence. However, because of the exploratory nature of

TABLE 6.6

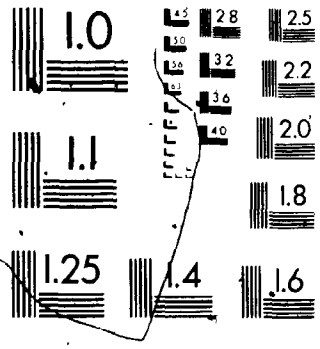
THE RELATIONSHIP OF THE INDEPENDENT VARIABLES WITH EXPECTATIONS

	SEARCH STAGE		SERVICING STAGE	
	SPEARMAN COEFF.	SIG.	SPEARMAN COEFF.	SIG.
Gender (Female buyer)	.2205	.001	.1824	.001
Income : Personal	-.1147	.020	-.1316	.009
Household			-.1695	.003
Age			.1432	.003
Market beliefs	-.1687	.001	-.1592	.001
General knowledge of cars	-.0939	.035		
Satisf. with last car	.1075	.019	.1443	.003
Satisf. with last repair outlet			.1163	.013
Impersonal indep. depth			-.1216	.009
Personal advoc. variety			-.1564	.001
Personal advoc. depth			-.1868	.001
Direct observ. variety			-.0970	.031
Direct observ. depth			-.0970	.031

this part of the study, for only four of the independent variables was the relationship specified prior to testing this hypothesis set.

Supporting the results obtained by Thirkell in his automobile study (1980), women had higher expectations than men at both stages of the buying process. The reasons underlying this phenomenon are not clear. Is it related to their relative lack of knowledge of cars or to their limited experience with buying cars? Or do women perceive the expectation scales differently from men? Whatever the

3



reason, an examination of the individual items forming the pre-search expectations scale reveals that women have higher expectations for nine of the eleven items in the scale. Similarly, for the pre-servicing expectations scale, women have higher expectations for all of the eighteen items composing the scale (Appendix G).

In support of the second hypothesis, the results show that income is negatively related to the level of both pre-search and pre-servicing expectations. Apparently, people with higher income have relatively less to lose than lower income consumers when buying a product as important as a car. Therefore, they might not have as high expectations about the dealers servicing them when buying or servicing their car. Presumably, higher income consumers might also change their car more often, in addition to having shorter time periods between car purchases. Consequently, they might be in a better position to know what to expect from their relationship with car dealers, thus reducing their expectations levels.

The third variable, age, appears to be independent of pre-search expectations. This finding is not surprising since there is really no a priori reason to believe that age would have an impact on what consumers expect when visiting dealers to buy a new car. On the other hand, age is positively correlated to the level of pre-servicing expectations. Apparently, older consumers tend to have higher expectations about the service they will receive from the dealer while their car is still under warranty. Explaining this result is difficult. It is possible that older consumers tend to be more

dependent than younger ones on their car as a means of transportation. Because of their age, these consumers may be less physically mobile. In addition, they may have larger families to transport. Older consumers, therefore, need a very reliable car, a situation which may lead them to develop higher expectations about the dealer servicing their new automobile.

The next variable, generalised market beliefs, was incorporated into the model so as to examine the extent to which consumers' views of the business system in general would be reflected in their expectations about car dealers. Based on the Thirkell study (1980), it was believed that consumers' expectations would not be influenced by their market beliefs. Contrary to what was expected, expectation levels were not independent of generalized market beliefs.

A comparison between Thirkell's generalized market beliefs scale and the one used in this study suggests an explanation for the discrepancy in the results. Thirkell's scale items were not selected so as to relate directly to the expectation construct used. However, the present scale includes belief statements which are directly related to the search expectation construct (scale items 2, 3, 5, 6) and to the servicing expectation construct (scale items 10, 11, 12, 13, 14, 15). Therefore, it is not too surprising that both expectation constructs are negatively related to the generalised market beliefs scale. This scale was constructed so that a more negative view of the business system resulted in higher score means. Consequently, the negative correlation found between this independent

variable and the two expectation measures should be interpreted as follows: consumers with more positive views of how the business system in general operates tend to develop higher expectation levels at both stages of the buying process. In other words, the positive thinking that some people have about business practices and organizations spills over and influences the expectations these people hold about car dealers, both when they start shopping for a new car and later, when they have just bought the car and are about to have it serviced at a particular dealership.

The effect of perceived risk on expectations was left open to empirical determination. The results indicate that this variable is not significantly correlated with the two expectation measures. Finally, Table 6.7 shows that specific self-confidence is positively related to the expectation measures. However, this relationship is not significant at the .05 level. Apparently, the way people see themselves, both in terms of their ability to judge the quality of a car and their ability to make a good choice, influences (but only a little) their expectations about new automobile dealers. Maybe the results obtained would have been stronger if this variable had measured the consumers' perception of their ability to judge dealers rather than cars.

In summary, this study again confirms the importance of taking into consideration individual differences such as gender and the income of the buyer to explain the formation of consumer expectations.

Hypothesis Set H8: Prior Experience

This hypothesis set stated that both pre-search and pre-servicing expectations decreased as consumers knowledge of cars in general and the number of cars previously owned increased. It also stated that pre-search expectations increased with greater levels of satisfaction with last car owned and that pre-search expectations was independent of satisfaction with the previous repair outlet. Finally, it was also hypothesised that pre-servicing expectations was independent of consumer satisfaction with last car owned but positively related to satisfaction with previous repair outlet. These expected relationships were all based on the belief that consumers learn from their past experience and rely on that information to form their expectations.

The results obtained confirm several but not all of the above hypotheses. Firstly, general knowledge of cars related negatively to both pre-search and pre-servicing expectations, but this relationship was significant only at the search stage. Apparently, consumers use their general knowledge of cars to form their expectations about the dealers selling cars, and the greater the general knowledge of cars the lower the expectation levels. But this knowledge appears to be a less relevant basis on which to form one's servicing expectations. Indeed, unlike search expectations servicing expectations relate only to a specific dealer. Therefore, the knowledge a consumer has of cars may be too general and thus less relevant at the servicing stage relative to the search stage.

The results also revealed the existence of a negative relationship between consumer pre-search expectations and number of previously owned cars, and a positive relationship between pre-servicing expectations and the same measure. However, neither one of these relationships is significant at the .05 level. This finding may reflect consumers' tendency to keep their car for an increasingly longer period of time. Given that the market for new automobiles changes constantly, it is possible that consumers may hesitate to generalize from their past experience as car owners, especially if it goes way back in the past. They may feel more comfortable relying on their more recent experiences such as their experience with the last car they owned.

The next findings are consistent with this explanation. Table 6.7 shows the existence of a positive relationship between satisfaction with last owned car and expectations at both stages of the buying process. It would seem, therefore, that people who are more satisfied with their last car also tend to expect more from the dealers they do business with.

In support of the next two hypotheses, satisfaction with the last repair outlet turned out to be independent of pre-search expectations and positively related to pre-servicing expectations. In other words, consumers who had a positive experience with the outlet servicing their previous car tended to transfer their feelings to the dealers who serviced their new car.

In summary, the results indicate that pre-search expectations are negatively related to general knowledge of cars, positively related to satisfaction with last owned car and independent of both number of previously owned cars and satisfaction with previous repair outlet. Pre-servicing expectations are independent of general knowledge of cars and number of previously owned cars, and positively correlated to satisfaction with both last owned car and previous repair outlet. These results suggest that consumers are influenced by their past experience when forming their expectations about the dealers selling and servicing new cars. This influence is not related to quantitative factors such as the number of cars owned in the past. Instead, it is related to factors surrounding recent ownership and usage of a car, as well as factors which directly concern the stage investigated.

The results are especially interesting in that they throw some light on a problem experienced by Thirkell (1980). This researcher found that consumer expectations about new cars were not related to previous experience. He concluded that consumer expectations are cognitively affected by other factors surrounding the most recent purchase of a new car, but remain relatively independent of 'affective' factors surrounding prior ownership experiences. The present study indicates that the lack of results obtained by Thirkell may be better explained by the type of experience measures used. These measures were number of new and used cars owned and previous new and used cars satisfaction. The last two measures were scales which took into consideration the satisfaction experienced by the consumers with up to the last five new or used cars purchased in the past.

Apparently, these measures were inadequate given the type of product and market investigated. Measures which deal with the most recent experience of the consumer may be more relevant when the product under investigation changes constantly and when the corresponding market is very dynamic. In addition, consumers tend to remember better the recent past as opposed to something which happened years ago, as is often the case with the purchase of durable products such as cars.

Hypothesis Set H9: Prepurchase Search

This set of hypotheses stated that the more consumers search prior to buying a new car, the more likely they are to lower their pre-servicing expectations. This set of hypotheses stems from the belief that as consumers are exposed to more sources of information, they become more aware of the realities of the marketplace. They therefore obtain more information not only on the product they want to buy, but also on the different dealers servicing this product. This awareness encourages consumers to develop more realistic and thus, somewhat lower expectations about the dealer who will service their new car while under warranty.

The results indicate that this relationship holds for nine of the ten search dimensions. But the relationships are significant at the .05 level only for five of them. These dimensions are impersonal independent depth, personal advocate variety and depth and direct observation variety and depth. Apparently, as consumers read more reports about cars and dealers' service, as the number of car dealers

visited increases both within and across car manufacturers and as consumers make more use of test drives offered to them, the pre-servicing expectation levels of consumers decrease. This result suggests that consumers learn a lot during their visit to car dealers. This learning motivates them to lower their expectations about the service they are going to receive from the dealer where they purchase their new car. This finding indicates that visits to car dealers is one of the main sources of information used by consumers to obtain information about the dealers themselves and the kind of service they provide.

In addition to the explanation provided above, there is another possible explaination for the results obtained in the testing of this hypothesis set. It is possible that consumers who had had a bad experience with a dealer tend to shop more during their next car purchase. These people may have developed lower expectations about any dealer who sells and services new cars. In order to verify this hypothesis, the relationship between the measures of satisfaction with previous repair outlet and personal advocate variety and depth was examined.

The findings indicate that there is indeed a statistically significant negative relationship between these variables, which provides some support for this second explanation. In other words, people who were less satisfied with the repair outlet (independent garage or car dealer) servicing their previous car tended to visit more dealers when looking for a new car to buy. And subsequently, these

consumers may have formed lower expectations about the dealer servicing their new car, not only because they visited several dealers, but also because they had a bad experience with car repairs in the first place.

A second useful source of information regarding servicing expectations consists of consumer reports, technical reports, car magazines, and the local Better Business Bureau. These reports are highly credible as they are not sponsored by car manufacturers or dealers. In addition, they provide good 'objective' information since they are often based on laboratory tests and large samples. It is thus not surprising that the more these reports are used, the lower the expectation levels. Consumers probably use the other sources of information mainly to obtain some information about the product itself rather than about the different dealers selling and servicing it.

In summary, this research study provides general support for the hypothesis that consumer expectations are negatively related to the amount of search done by consumers. In the case of cars, pre-servicing expectations are especially related to greater use of impersonal independent, personal advocate, and direct observation sources. They are also negatively related (but not significantly) to the use of most of the other sources of information. This result supports the point already made by Thirkell (1980) that there is a need to separate out the types of search being undertaken, when evaluating overall prepurchase search effects upon the formation

of consumer expectations. The managerial implications of these findings will be discussed in the next chapter.

This section reported on the impact of individual characteristics, prior experience and prepurchase search on the formation of consumer expectations at the two stages of the buying process. The next section will discuss the effect of the same variables on the disconfirmation perceived by consumers following their search and servicing experiences.

6.4 DISCONFIRMATION: ANALYSIS OF COVARIANCE

This section and the following one describe the way different sources of expectations are reflected in subsequent levels of disconfirmation, regardless of the level of expectations held. Put differently, this section seeks to answer the following question: do the variables described above influence the accuracy of consumer expectations and hence, the probability of subsequent disconfirmation? The two disconfirmation measures used in this section took into consideration both the magnitude and direction of reported disconfirmation.

As with the testing of hypothesis sets seven to nine, the procedure used in this part of the research involved following the three major analysis steps described at the beginning of this chapter. The objective of this exercise, as in section 6.2, is to find the best way to structure the testing of hypothesis sets ten to twelve.

The first step involved running a series of stepwise regressions within each car origin by gender cells, as described earlier, in order to identify the independent variables entering in the covariance analysis. Table 6.8 presents the results of these regressions. Of the nineteen independent variables initially entered into the post-search disconfirmation equations, six variables were retained in the model since they were statistically significant in at least one of the cells. These variables include two individual characteristics and four prepurchase search constructs. Similarly, the post-servicing disconfirmation regressions retained one individual characteristic and five prepurchase search constructs. In both cases, none of the prior experience variables were retained in the model.

For the second step of the procedure, two analyses of covariance were performed which conformed to the method of Lin and White (1968) described in section 6.2 of this chapter. The results of these two analyses are presented in Tables 6.9 and 6.10.

Row one of Table 6.9 indicates that the six independent measures explain 8.2 percent of the total variance in post-search disconfirmation, a result which is significant at the .01 level. On the other hand, adding car origin as a covariate (Rows 2 and 3) does not significantly increase the explanatory power of the model. Including the covariate gender (Rows 4 and 5) also has no statistically significant effect in explaining the variance in post-search disconfirmation.

TABLE 6.8

DISCONFIRMATION MODELS

POST-SEARCH DISCONFIRMATION 6 VARIABLE MODEL

Perceived risk
Market beliefs
Personal advocate variety
Personal independent variety
Impersonal independent depth
Personal advocate depth

POST-SERVICING DISCONFIRMATION 6 VARIABLE MODEL

Market beliefs
Personal advocate variety
Personal independent variety
Direct observation variety
Impersonal independent depth
Personal independent depth

Similar results were obtained in Table 6.10. On their own, the six independent measures explain 6.2 percent of the variance in levels of post-servicing disconfirmation. Rows two and three indicate that the covariate car origin does not contribute significantly in explaining the variance in the intervening variable. Adding gender as a second covariate gives a different picture. Row four confirms that including gender as a dummy variable does not significantly improve the power of the model. However, row five shows that allowing for different independent variable slopes within each car origin by gender cell increased the explained variance from 9.3 percent to 17.1 percent, which is statistically significant at the .01 level.

This last result suggests the presence of an interaction effect

TABLE 6.9

POST-SEARCH DISCONFIRMATION ANALYSIS OF COVARIANCE USING 6 VARIABLE MODEL

DEPENDENT VARIABLE = POST-SEARCH DISCONFIRMATION

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	81.7	6	13.6	8.2	5.42	.01
Different ori. cell intrcpts	IND+ORIGIN	5.0	1	5.0	8.7	1.99	--
Different ori. cell slopes	IND*ORIGIN	17.9	6	3.0	10.5	1.19	--
Differ. gender cell intrcpts	IND+GENDER*ORIG	7.3	1	7.3	11.2	2.89	--
Differ. gender cell slopes	IND*GENDER*ORIG	33.9	12	2.8	14.6	1.12	--
	TOTAL EXPLAINED	145.7	26	5.6	14.6	2.23	.01
	RESIDUAL	852.2	339	2.5			
	TOTAL	997.9	365				

TABLE 6.10

POST-SERVICING DISCONFIRMATION ANALYSIS OF COVARIANCE USING 6 VARIABLE MODEL

DEPENDENT VARIABLE = POST-SERVICING DISCONFIRMATION

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	127.5	6	21.3	6.2	4.15	.01
Different ori. cell intrcpts	IND+ORIGIN	13.9	1	13.9	6.9	2.72	--
Different ori. cell slopes	IND*ORIGIN	49.0	6	8.2	9.3	1.59	--
Differ. gender cell intrcpts	IND+GENDER*ORIG	.0	1	.0	9.3	.01	--
Differ. gender cell slopes	IND*GENDER*ORIG	159.7	12	13.3	17.1	2.60	.01
	TOTAL EXPLAINED	350.1	26	13.5	17.1	2.63	.01
	RESIDUAL	1701.0	332	5.1			
	TOTAL	2051.1	358				

between the covariates gender and car origin and the six independent measures. In other words, post-servicing disconfirmation was found to be independent of both gender and car origin when they are considered individually. However, the underlying determinants of post-servicing disconfirmation were shown to differ significantly when the type of car owned and the gender of the owner are considered simultaneously. To explain this last result is difficult since there are no ready theoretical explanations for it. It could possibly be a fruitful area for further research.

Since the covariance analysis performed did not dissociate the effect of the variable gender on its own, a second set of covariance analysis was performed which excluded the variable car origin. The results obtained are presented in Tables 6.11 and 6.12.

As these two tables indicate, the variable gender does not appear to have a direct impact on the levels of both post-search and post-servicing disconfirmation. In both tables, rows two and three reveal that adding gender as a dummy variable does not significantly improve the power of the model. This result indicates that disconfirmation is independent of the gender of the new car's owner.

The absence of impact of the measure car origin is consistent with the earlier discovery that consumer expectations do not vary depending on where the car was manufactured. The second result, independence of gender and disconfirmation, implies that even though women tend to form higher expectation levels than men, this does not affect

TABLE 6.11

POST-SEARCH DISCONFIRMATION ANALYSIS OF COVARIANCE USING 6 VARIABLE MODEL

DEPENDENT VARIABLE = POST-SEARCH DISCONFIRMATION

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	81.7	6	13.6	8.19	5.39	.01
Differ. gender cell intrcpts	IND+GENDER	1.8	1	1.8	8.37	.72	--
Differ. gender cell slopes	IND*GENDER	25.5	6	4.3	10.93	1.69	--
	TOTAL EXPLAINED	109.1	13	8.4	10.93	3.32	.01
	RESIDUAL	888.9	352	2.5			
	TOTAL	997.9	365				

TABLE 6.12

POST-SERVICING DISCONFIRMATION ANALYSIS OF COVARIANCE USING 6 VARIABLE MODEL

DEPENDENT VARIABLE = POST-SERVICING DISCONFIRMATION

TEST	MODEL	INC' SUMS OF SQUARES	DF	MEAN SQUARES	CUM' R SQUAR	F RATIO	F SIG
Significance of Bi's	Independent var's (IND)	127.5	6	21.2	6.22	3.88	.01
Differ. gender cell intrcpts	IND+GENDER	.0	1	.0	6.22	.01	--
Differ. gender cell slopes	IND*GENDER	32.0	6	5.3	7.78	.97	--
	TOTAL EXPLAINED	159.5	13	12.3	7.78	2.24	.01
	RESIDUAL	1891.6	345	5.5			
	TOTAL	2051.1	358				

the subsequent disconfirmation levels felt by consumers.

Together, these findings suggest the following. Disconfirmation is the difference between expectations and perceived performance. Apparently, at least in the case of the purchasing and servicing stages of the buying process for a new car, the main source of influence of disconfirmation is the perceived performance component, that is, the way consumers perceive what happened during their visits to car dealers, and later what happened when they went to their dealer to service their new car. The individual effect of the six independent measures retained in the two disconfirmation models will be discussed in the next section. In light of the results, the next step of the analysis was performed without taking into consideration the variables gender and car origin.

6.5 DISCONFIRMATION - TESTS OF HYPOTHESIS SETS H10 to H12

The third step of the analysis tries to assess the individual effects of the independent variables on post-search and post-servicing disconfirmation. This goal was attained by calculating Spearman Rank correlations between the intervening and independent measures. The nature of this part of the analysis is highly exploratory which means that in most instances, a two-tailed test was performed with a significance of .025. In the few cases where a direction was hypothesized, a one-tailed test was performed with a significance level of .05. Table 6.13 presents the correlation coefficients of the independent measures that were significantly correlated to

TABLE 6.13

THE RELATIONSHIP OF THE INDEPENDENT VARIABLES WITH DISCONFIRMATION

	SEARCH STAGE		SERVICING STAGE	
	SPEARMAN COEFF.	SIG.	SPEARMAN COEFF.	SIG.
Income : Personal	-.1526	.003	-.1293	.012
Household	-.1376	.014	-.1590	.006
Market beliefs	-.1643	.001	-.2474	.001
Perceived risk			-.1257	.009
Impersonal indep. depth	-.0914	.039		
Personal advoc. variety	-.1881	.001	-.1719	.035
Personal advoc. depth	-.1978	.001		

the intervening variables. Table 6.14 displays a comparison between the hypothesised and actual directions of the relationship existing between the original set of independent variables and the two disconfirmation measures, based on Spearman Rank correlations.

Hypothesis Set H10: Individual Characteristics

This hypothesis set stated that disconfirmation was negatively related to generalized market beliefs and positively related to specific self-confidence at both stages of the buying process. As for the other individual characteristics, the relationships could not be specified in advance.

The results of Table 6.14 support the existence of a relationship between both post-search and post-servicing disconfirmation and

TABLE 6.14: THE RELATIONSHIP OF THE INDEPENDENT VARIABLES WITH DISCONFIRMATION

INDEPENDENT VARIABLE	SEARCH STAGE		SERVICING STAGE	
	HYPOTHESISED DIRECTION	ACTUAL DIRECTION	HYPOTHESISED DIRECTION	ACTUAL DIRECTION
H.10 INDIVIDUAL CHARACTERISTICS				
gender (Female buyer)	?	+	?	+
income	?	-*	?	-*
age	?	+	?	+
market beliefs	-	-*	-	-*
perceived risk	?	-	?	-*
specific self-confidence	+	+	+	+
H.11 PRIOR EXPERIENCE				
general knowledge of cars	?	-	?	-
no. of previously owned cars	?	-	?	-
satisf. with last owned car	?	+	?	+
satisf. with previous repair outlet	?	+	?	+
H.12 PREPURCHASE SEARCH				
impersonal advocate variety	-	-	?	-
" " depth	-	-	?	-
impersonal independent variety	-	-	?	-
" " depth	-	-*	?	-
personal advocate variety	-	-*	?	-*
" " depth	-	-*	?	-
personal independent variety	-	-	?	+
" " depth	-	-	?	+
direct observation variety	-	-	?	-
" " depth	-	-	?	-

N/A: not applicable.
* : relationship significant at the .05 level or better, based on Spearman Rank corr.

generalized market beliefs. It appears that people who experience some negative disconfirmation also tend to have more negative market beliefs. Of course, this study cannot tell what causes what. Do people tend to be more sensitive about the differences between expectations and perceived performance because they have a more pessimistic view of the market in the first place? Or do they develop more negative beliefs about the marketplace following a not as good as expected experience with making an important purchase? More than likely,the reality lies between these two explanations in that these two variables probably influence one another.

The hypothesis that specific self-confidence is positively related to disconfirmation levels was not supported by the data. The results indicate a positive relationship between these variables at both stages of the process, but this relationship is not significant at the .05 level. This lack of result can probably be explained by the measure of self-confidence used. A measure which deals with the ability to judge car dealers rather than cars themselves might have been more meaningful in this particular context.

Concerning the other individual characteristic measures, Table 6.14, with two exceptions, reveals no statistically significant relationship. First, the results indicate a negative relationship between income and both post-search and post-servicing disconfirmation. In other words, the higher the income, the more negative the disconfirmation felt. Explaining this result is not an easy task. It is possible that higher income people tend to be more critical

of the performance they get from products, services and people in general. To explore this question, Spearman Rank correlations were calculated between income and education levels. The results show a positive correlation between education and both personal income (.2134) and household income (.2585). Both coefficients are statistically significant at the .001 level. As a second step, the variable education was correlated with post-search and post-servicing disconfirmation. The results were that the relationship is negative in both cases (however, this relationship is statistically significant only at the search stage). The combination of these findings indicates that higher income people may be more critical because they tend to be better educated and consequently, more aware of their rights as consumers.

The second exception is that post-servicing disconfirmation is negatively correlated with perceived risk. This finding means that consumers who perceive a higher amount of risk regarding the purchase of a new car tend to experience more negative disconfirmation. There may be several reasons accounting for this situation One reason may be that these consumers, because of the high risk they perceive, may be more suspicious to start with when they need car repairs or maintenance. Consequently, they may become more critical when they evaluate their dealer's service because feel they have more at stake.

In summary, the results indicate that post-search disconfirmation is negatively related to generalised market beliefs and income le-

vels. Post-servicing disconfirmation was found to be negatively related to income, generalised market beliefs and perceived risk. Finally, specific self-confidence is independent of both post-search and post-servicing disconfirmation.

Hypothesis Set H11: Prior Experience

No specific direction was specified for this hypothesis set. Table 6.14 reveals that none of the prior experience measures appears to be related to either post-search or post-servicing disconfirmation. This finding again supports the conclusion drawn by Thirkell (1980) in his automobile study. This researcher, after obtaining similar results, concluded that 'consumers by and large evaluate each purchase experience on its own merits' (p. 173). Given the results obtained in this section, we must agree with that statement.

Hypothesis Set H12: Prepurchase Search

Hypothesis set twelve stated that the prepurchase search measures would be negatively related to post-search disconfirmation. The relationship between this set of measures and post-servicing disconfirmation was unclear and remained to be clarified.

The findings indicate the existence of a negative relationship between all ten search measures and the post-search disconfirmation measure. However, this relationship is statistically significant for only three search categories. This result generally supports the first hypothesis set. The three prepurchase search measures which were negatively and significantly correlated are: impersonal

independent depth, personal advocate variety and personal advocate depth. As Table 6.13 shows, the strongest relationship is related to the two personal advocate measures. Apparently, the more visits consumers make to car dealers, the more negative disconfirmation they experience with respect to dealers selling new cars. This finding suggests two things. First, the more consumers are in contact with car dealers, the more chances they have of meeting one or several dealers who do not meet their expectations. Secondly, if in the early stages of the prepurchase search consumers encounter a negative experience with a dealer, they might be inclined to visit more dealers until they find one that they feel they can trust, or until they become convinced that all dealers are the same and one must therefore be content with the existing situation. In both cases, the situation has an impact on the subsequent disconfirmation felt. Both explanations have some managerial implications which will be discussed in the next chapter.

Post-search disconfirmation is also negatively related to the level of search made through the impersonal independent source of information. The relationship between these measures however is relatively weak. It seems that somehow the more reports consumers read about cars and car dealers, the more negative disconfirmation they feel. Maybe some consumers read more 'objective' reports because they are more critical or suspicious in general, or because they had a bad experience in the past which made them more cautious to start with. These two situations could explain the negative relationship found between the impersonal independent depth measure and post-

search disconfirmation.

The results displayed in Table 6.14 also indicate that there are no statistically significant relationships between post-search disconfirmation and the remaining search measures. Regarding post-servicing disconfirmation, no statistically significant relationship was discovered between this measure and any of the search measures with one exception. Indeed, the results showed a weak and negative relationship between post-servicing disconfirmation and personal advocate variety. The conclusion, therefore, is that consumers are relatively unaffected by what happened during their search for a new car when the time comes to evaluate their servicing experience at a dealer. This finding suggests that during their search, consumers are trying to get some more information on the car itself rather than on the servicing aspect of their purchase. Consequently, when they later evaluate the servicing done by their dealer, consumers take into consideration mostly the perceived performance of the servicing experience in relation to their prior expectations about that particular dealer.

In summary, some of the prepurchase information sources tend to have an impact upon the extent to which prepurchase expectations are perceived as being fulfilled. These information sources are impersonal independent depth and personal advocate variety and depth. On the other hand, post-servicing disconfirmation appears to be independent of all the search measures but one, the personal advocate variety source.

Conclusion: This chapter investigated the determinants of consumer expectations and disconfirmation levels. The results indicate that consumer pre-search expectations vary depending on individual characteristics (gender, income and generalised market beliefs) and prior experience (general knowledge of car and satisfaction with last owned car). Pre-servicing expectations are related to individual characteristics (gender, income, age, generalised market beliefs), prior experience (satisfaction with last owned car and with previous repair outlet) and prepurchase search (impersonal independent depth, personal advocate variety, personal advocate depth, direct observation variety and direct observation depth). Post-search disconfirmation is related to individual characteristics (income and generalised market beliefs) and prepurchase search (impersonal independent depth, personal advocate variety and personal advocate depth). Finally, post-servicing disconfirmation is related to individual characteristics (income, generalised market beliefs and perceived risk) and prepurchase search (personal advocate variety). Neither one of the disconfirmation variables is related to prior experience. The next chapter discusses the implications of these findings and those of Chapter V for theory, managers and public policymakers.

CHAPTER VII

SUMMARY AND IMPLICATIONS OF THE STUDY

This chapter first summarizes the major points and findings of the study. It then discusses the managerial and public policy implications of the research. Finally, it highlights the implications of the research for CS/D theory and suggests some avenues for future research.

7.1 SUMMARY OF THE RESEARCH

The first objective of the study was to model the major determinants of consumer expectations, disconfirmation and levels of satisfaction, and the relationships among them at the sub-system level. The second objective was to test the model empirically using the distribution system for new automobiles as the sub-system. In this study, the distribution system of a product is defined as the set of stores and/or dealers selling that product to consumers or buyers. This definition includes the specific store or dealer where the product was purchased as well as the outlet responsible for servicing the product during the warranty period and the duration of the service contract if one was purchased with the product. This definition applies mainly to durable products.

The model hypothesised that satisfaction with the distribution system is a function of a) consumer post-search satisfaction with the stores or dealers selling the product, b) consumer post-servicing satisfac-

tion with the store or dealer where the product was purchased and serviced, and c) consumer satisfaction with the product itself. The model also hypothesised that consumer satisfaction, at each stage of the buying process, is a direct function of both the level of expectations held by the consumer prior to engaging in the particular stage and the extent to which those expectations were positively or negatively disconfirmed. Finally, it was hypothesised that expectation and disconfirmation levels at each stage of the process are a function of individual characteristics, prior experience and the level and type of prepurchase search done by consumers (except for pre-search expectations which are not influenced by prepurchase search).

Not all the relationships mentioned above were tested in this research. Instead, the study focused mainly on the search and servicing stages and ignored the relationships between expectations, disconfirmation and satisfaction with the product itself. The relationships at this stage of the process were not considered in the analysis since they were thoroughly investigated recently by Thirkell (1980). This omission also simplified the task required of the respondents to the survey.

Pre-search and pre-servicing expectations were operationally defined as the average of the sum of attribute-specific expectation levels multiplied by their associated levels of importance. Similarly, post-search and post-servicing disconfirmation were defined as the average of the sum of attribute-specific disconfirmations multiplied

by corresponding importance weights. Post-search and post-servicing satisfaction were defined as the average of the sum of a series of attribute-specific satisfaction scores. Eleven items were finally selected for each of the three search scales (the satisfaction, expectation and disconfirmation scales) while eighteen items formed each of the three servicing scales. Finally, both satisfaction with the product performance and overall satisfaction with the distribution system were operationalised as a single overall measure of satisfaction.

While all the multiple-item scales demonstrated high reliabilities, not all of the scales followed a normal distribution. Indeed, four variables (overall satisfaction, post-servicing satisfaction, post-search and post-servicing disconfirmation) appeared to be skewed, and to be too flat or too peaked compared to a normal distribution. This last finding is consistent with those of several studies where the majority of consumers indicated that they were satisfied with their experience.

The data for this research were collected through a mail survey of new car owners. The sampling frame used was a regional subset of urban and rural Ontario residents who had purchased a new passenger car within the previous six months. The owners' names were obtained through license plate registrations. One thousand two hundred questionnaires were mailed in the Fall 1981. The principal driver and owner of the new car was asked to respond to the questionnaire.

While the response rate was 41.8 percent, 380 questionnaires (31.7 percent of the original sample) were usable. Women made up roughly one-third of the respondents and owners of imported cars (i.e. cars made from a manufacturer located outside of North America) also made up one-third. All the respondents had purchased their cars within the previous eleven months. It was therefore assumed that the majority of cars was still under warranty at the time of the survey. A comparison of the cars owned by the respondents and those listed in the initial sample indicated no significant differences in the makes purchased by the two groups.

The data analysis took place in two stages. In the first instance, the study investigated the relationships among expectation, disconfirmation and satisfaction levels at both the search and servicing stages. The determinants of overall satisfaction with the distribution system were also examined. The results of this analysis are reported in Chapter V. Secondly, the analysis focused on identifying the major correlates of expectation and disconfirmation levels at the two stages of the process. These results are presented in Chapter VI.

Chapter V had as its objective the evaluation of the Expectancy Disconfirmation paradigm as an explanatory model of consumer satisfaction at the sub-system level. Given the consistency of the interrelationships across both imported and domestic cars, the first six hypotheses were tested with a pooled sample of all the respon-

dents.

Contrary to what was hypothesised, expectations were not independent of disconfirmation levels. The results indicated a positive relationship between expectation and disconfirmation levels among the total group of respondents for both the search and servicing stages of the buying process. Additional tests revealed that the direction of the disconfirmation should be considered when assessing the relationship between expectations and disconfirmation. Indeed, the analysis showed that among those reporting positive disconfirmation, the magnitude of reported disconfirmation increased linearly with higher expectations. A similar but opposite phenomenon was observed among consumers reporting negative disconfirmation.

The next three hypotheses investigated the relationships among expectations, disconfirmation and satisfaction. Firstly, the study demonstrated that there is a curvilinear relationship between consumer expectations and satisfaction. However, the form of this relationship varied depending on the stage of the buying process. At the search stage, higher expectation levels were associated with greater consumer satisfaction while at the servicing stage, there were more extreme feelings of satisfaction or dissatisfaction among consumers who reported higher expectation levels. Secondly, both post-search and post-servicing satisfaction were a direct linear function of the extent to which expectations were positively or negatively disconfirmed.

Thirdly, the analysis verified the existence of "tolerance regions" by examining the association between expectation and disconfirmation levels among satisfied and dissatisfied consumers. The data revealed that at both stages, even if they experienced some negative disconfirmation, a fair number of consumers still felt satisfied to a certain extent with their experience with car dealers. However, almost all the consumers who expressed some dissatisfaction evaluated their experience with car dealers as being negatively disconfirmed. The conclusion, therefore, is that there is a great deal of consistency between this set of relationships and the contrast view of CS/D theory, although modified by the existence of consumer tolerance regions with respect to negative disconfirmation.

Finally, the results showed that the satisfaction consumers feel about each component of the distribution system of a product is reflected in their overall evaluation of that system. The most important source of influence in this study was post-servicing satisfaction, followed by post-search satisfaction and then, by product performance satisfaction.

With one exception, the data supported all the relationships described in the conceptual model, thus giving empirical support for the construct validity of the research model. The exception, the positive (even if weak) relationship found between expectation and disconfirmation levels, can possibly be explained by the special nature of the product purchased. Indeed, in the case of services, consumers are often part of the production process and can therefore influence

to a certain extent the quality of the service they receive. For example, consumers who need to have their car repaired can influence the quality of the service they receive by the kind of problem description given to the dealer. A good description can save time and money for both the car owner and the repair outlet. Depending on the level of their prior expectations, consumers might act in a way consistent with these expectations and thus influence the output, a case of self-fulfilling prophecy.

Chapter VI investigated the correlates of expectation and disconfirmation levels. Pre-search expectations turned out to be closely related to individual characteristics and prior experience. Pre-search expectations were higher among women and among those who were more satisfied with their last owned car. They were lower among consumers with higher income, those with more negative beliefs about the market system, and those with a better general knowledge of cars. Individual characteristics and prior experience, as well as the amount and kind of prepurchase search undertaken by consumers were also closely related to pre-servicing expectations.

At the servicing stage, expectations were higher among women, older consumers and those who were more satisfied with both their last owned car and with the previous repair outlet used. These expectations were lower among people with higher income and with more negative market beliefs. Pre-servicing expectations were also negatively related to consumer use of sources of information such as Better Business Bureaus, Consumer Reports, Technical Reports and Car Maga-

zines (Impersonal Independent Depth). Those same expectations also related negatively to the number of car dealers visited, both within and across car manufacturers (personal advocate variety and depth). Finally pre-servicing expectations had a negative relationship with consumers test driving of different cars (direct observation variety and depth). At both stages of the buying process, expectation levels did not differ according to car type (i.e. imported or domestic).

As with previous results, the type of car (domestic/imported) did not have any significant relationship to levels of disconfirmation at both stages of the buying process. However, individual characteristics and prepurchase search did have an association, while prior experience did not. Post-search disconfirmation correlated negatively with income level, market beliefs, impersonal independent depth, and personal advocate variety and depth. Post-servicing disconfirmation correlated negatively with income, market beliefs, perceived risk, and personal advocate variety.

These results provide some meaningful insights into the factors influencing the development of consumer expectations and disconfirmation. However, the most powerful covariance model generated explained only 20.5 percent of the variance in consumer expectations and 17.1 percent of disconfirmation variance. These results indicate that other factors not specifically captured in the conceptual model have an impact on these variables. The identification and measurement of these factors could be the subject of future research efforts. For example, the factors which deserve some attention include

attitude towards the retail outlets selling the product, consumer norms and values, perceived success with past efforts in complaining to the retail or repair outlets and situational factors. The next three sections discuss the general implications of the results of this study.

7.2 MANAGERIAL IMPLICATIONS

The conceptual model which guided this study describes mainly the purchasing process of durable products such as automobiles, snowmobiles, other motorised vehicles and electrical appliances. Therefore, caution should be exercised in generalizing the results to products which are generally purchased with less extensive shopping and which need little or no servicing. However, since one of the two stages investigated concerns the servicing of a product, some of the results could also be applied, with caution, to outlets or companies selling services such as home improvements, plumbing and electrical repairs.

The first finding which holds some implications for managers pertains to the relationship between expectations, disconfirmation and satisfaction. Expectation and disconfirmation levels were found to be positively related at both stages of the buying process. This result seems to suggest that raising consumer expectations through advertising, personal selling and promotions is a viable option, given the positive effect it can have on the evaluation of performance and hence, on subsequent disconfirmation and satisfaction levels. How-

ever, it is important to remember that the relationship found was weak, which means that the effect is very small, or that it exists only for a small number of consumers. Also, correlation by no means implies causality, especially since the research design could not verify the existence of a causal relationship between expectations and disconfirmation. It is possible, too, that the expectation measures were biased due to a halo effect associated with the recall procedure.

Furthermore, at least for the servicing stage, very high expectations do not necessarily produce a desirable effect. If we recall the form of the relationship between expectation and satisfaction levels at this stage, high expectations were accompanied by more extreme feelings of satisfaction or dissatisfaction. Thus, if high expectations are followed by positive disconfirmation, the effect is beneficial to the firm. If high expectations are negatively disconfirmed, however, thus indicating that managers did not raise performance commensurately, the consumer may feel very dissatisfied. The consequence will be reduced consumer confidence in the outlet which serviced the product, a lower probability of repeat purchase by consumers after the warranty expires and the chance that consumers will voice their dissatisfaction to others. Consumers may also complain to the service manager and to the manufacturer. In the final analysis marketers should at least ensure that product benefits match consumers' expectations.

If there was no bias in the expectation measures due to a halo effect,

then the special nature of services is one possible explanation of the positive relationship between expectations and disconfirmation. Given that the customer is often part of the production process in the case of services, consumers may, by their attitude and behavior, influence the quality and nature of the service they buy. Thus, consumers who arrive at the dealer with high expectations may be more demanding and more precise in the way they express their needs and wants. Consequently, they may receive better service from the dealer. Such a customer is not always easy to handle, but from the customer's point of view and consequently for the dealer too, the result is more satisfying. The challenge may therefore be the consumers who arrive at the dealer or store with low expectations. In this situation, the task facing the firm is to make sure that these consumers are well served and made to feel satisfied enough to return next time with higher expectations. These consumers may also have a positive impact on the dealer's sales and reputation through "word of mouth" influence with friends. Thus, the task is to work on the long term rather than the short term in order to build a satisfied and loyal clientele.

This last suggestion is reinforced by the finding that past experience influences consumer expectations. Indeed, the results show that the more satisfied consumers are with the last car they owned, the higher their search and servicing expectations. Also, consumers who are more satisfied with their previous repair outlet tend to have higher servicing expectations. These findings show that consumers learn from their experience and that retailers and manufacturers

can benefit by treating them well over time.

The next finding which holds some implications for managers is the discovery of a tolerance region with respect to negative disconfirmation. This result shows that consumers are by and large flexible and that they can tolerate a certain amount of negative disconfirmation before feeling dissatisfied. Consequently, consumers are willing to provide dealers with a certain margin for error. Even if consistently good performance on the part of dealer is best and should be strived for, occasional lapses on the part of the dealer may be tolerated by the consumer. However, sales and service people should not abuse this situation. There is a limit to the consumer's tolerance which may vary from consumer to consumer and which may not be easy to assess before the fact.

The analysis also shows that how consumers feel about the distribution system of a durable product is influenced by their feelings about each of its components. In the case of new automobiles, post-servicing satisfaction, followed by post-search and product performance satisfaction influence overall satisfaction. However, it is important to note the following three qualifications.

Firstly, a recall procedure was used to collect the data. The choice of this procedure involved a trade-off between the quality of the search data and the quality of the servicing data. The longer the time period, between the data collection and the purchase of the car, the more likely it is that buyers had one or several repair or servi-

cing experiences with their dealers. At the same time, the longer the time period between the data collection and the purchase of the car, the higher the probability that buyers may have forgotten about their search experience. It is possible, therefore, that time may have affected the relative importance of each satisfaction measure in determining overall satisfaction.

Secondly, it is likely that the relative importance of each satisfaction measure in determining overall distribution system satisfaction may be time specific. As buyers use their cars and have different experiences regarding performance, reliability and servicing, the relative importance of these satisfaction measures in determining overall satisfaction with the distribution system, may vary. Over time, for example, buyers may experience deteriorating dealer service and therefore, service satisfaction may become important. At other times there may be problems with the product itself, rust for example, and product satisfaction may become more important in determining overall satisfaction.

Thirdly, because the three satisfaction measures are highly colinear, a bivariate measure was used to determine the importance of each measure relative to overall satisfaction. The problem of multicollinearity made it impossible to measure the contribution of each satisfaction measure after removing the effect of the other measures in determining overall satisfaction with the distribution system.

With these qualifications in mind, the finding that post-servicing

satisfaction followed by post-search satisfaction and product performance satisfaction influence overall satisfaction suggests that car manufacturers and new automobile dealers should pay special attention to the quality of after-sales service. Selling a new car is just the first step in the process. Of crucial importance to consumers is not just owning a new car but, in addition, having it perform well, having it reliable and having it trouble-free and durable. When shopping for a new car, consumers may see a specific dealer once or twice, but after the car is purchased, they must visit the dealer several times during a period of a year or more. In addition, unlike some other products, buyers are stuck with the car they purchased. They cannot return it or exchange it if the car and the dealer do not perform as well as they expected. Furthermore, because a car is a product which is used virtually everyday, it can become a major source of frustration for the unfortunate buyer who does not receive good service from the dealer. Finally, even if an automobile is a durable product which lasts for several years and for which many consumers shop a lot, several consumers are brand loyal. Brand loyalty in this case probably has as much if not more to do with good service and a friendly relationship with a specific dealer than with having purchased a good product in the first place.

On the basis of this study, new car dealers should ensure that their service department is given as much attention as the sales department. Employees who provide reliable and good quality service may very well be their best asset. Car manufacturers should also try to encourage their dealers to provide efficient after-sales service.

It is to their advantage to do so because good after-sales service has an effect on their brand image and may make a difference in the stimulation of repeat purchases and the development of loyal customers.

Since product performance satisfaction influences overall satisfaction with the distribution system, this may indicate that consumers see the dealers as partly responsible for the quality of cars they sell. Consumers may feel that dealers should make sure that the products they sell function well and do not require an unusual number of service visits. They may believe that dealers have some bargaining power with manufacturers and that they can apply pressure on the manufacturer to deliver good quality cars. Whether this is true for all dealers, the fact remains that consumers' satisfaction with products bought influences their perception of car dealers.

This study shows that, as consumers read more reports about cars and dealers' service, as the number of car dealers visited increases both within and across car manufacturers and as consumers make more use of test drives offered to them, their pre-servicing expectation levels decrease. This finding suggests that visits to car dealers are good sources of information to learn about dealers' service. Unfortunately, these visits do not seem to inspire much confidence in consumers. It is possible that salespeople over-emphasize product characteristics and payment facilities to the detriment of after-sales service. It seems as though consumers need and want relevant information about the servicing of new cars and that the information

they receive during their visits to dealers is insufficient or inadequate. The effect on the prospective buyers may be a reduction in the level of their servicing expectations.

The results suggest, therefore, that dealers should improve the training of their salesforce in the various aspects of after-sales service. Salespeople, in addition to stressing product characteristics, should provide information to potentiel buyers on after-sales services provided. Finally, a visit to the service department could routinely be offered to customers so as to give them a chance to judge for themselves the quality of the service facilities. An opportunity to talk to the service manager may also be provided. Personal contact with a professional may bolster the buyer's confidence, especially if the buyer was not satisfied with the repair done at the previous repair outlet.

The finding that the more consumers visit car dealers, the more negative disconfirmation they experience with respect to dealers selling cars does not necessarily mean that more visits to dealers leads to more negative disconfirmation and hence, more dissatisfaction. However, this finding does suggest that salespeople should pay special attention to buyers who shop around a lot. These buyers may do more shopping because of a previous negative experience and hence, may start their shopping with lower expectations and possibly a hostile attitude towards salespeople. They may also shop more because they have greater awareness or because they are more knowledgeable consumers. As a result they may be more demanding on the sales-

people. Alternatively, they may shop more because they were relatively dissatisfied with the first dealers they met. This initial dissatisfaction may have produced subsequent negative results, and hence, more negative disconfirmation.

In all these cases, salespeople should make sure that they give even better service than usual to these buyers. They may also want to modify the way they conduct business with these people. Indeed, these consumers may be reluctant to hear a well rehearsed and standard sales pitch. It may be better to approach them by first questioning them on their needs and wants, and then trying to answer these instead of anticipating their questions in the first place. This strategy should make these shoppers more welcome and leave them with an impression of professionalism and friendly service.

Finally, the results hold some managerial implications especially for dealers and manufacturers of imported cars. This study shows that owners of imported cars are significantly less satisfied than those of domestic cars with nine of the eleven aspects of car sales investigated, and with five of the eighteen aspects of car servicing. Imported car buyers reported being less satisfied with dealership location, price negotiation, price of trade-in car, knowledge of product, repair and competition, respect shown to customers, willingness to listen, pressure-selling applied, follow-up after sale, willingness to solve problems, cost of dealer work, warranty honoured and waiting room.

Because of existing quotas on imported cars and the high demand for these cars, imported car dealers often find themselves in a sellers' market. Because of this advantageous situation, some dealers may not be monitoring, as closely as they could, the quality of the services they offer. In the short run, consumers may tolerate this situation because they have no other choice. But the market situation may eventually change. Domestic car manufacturers are changing their car models and modernising their production plants in order to better serve market needs and tastes. Consequently, imported car dealers and manufacturers should move as quickly as possible to improve the quality of their sales and service departments so as to avoid developing a negative image in the marketplace. It is often easier to destroy a good reputation than to build one.

In sum, this research suggests that dealers who are interested in improving customer satisfaction and sales should operate on a number of different fronts. Dealers should develop marketing programs which improve customer expectations. At the same time, they should ensure that their own sales and service performance at least match these expectations. After-sales service is especially critical and special attention should be paid to this. The best service facilities possible should be provided. In addition, salespeople should be trained to discuss with potential buyers the service facilities available. Lapses in service performance should be noted and acted upon quickly since the tolerance region of consumer may cause them to delay experiencing dissatisfaction until it is too late. Finally since dealers are evaluated on product performance,

feedback should be provided to manufacturers so that product problems can be corrected. Thus on the basis of this study, dealers should focus on improving buyers expectations, providing superior after-sales service, maintaining well trained salespeople, rectifying service lapses and providing feedback to manufacturers.

7.3 PUBLIC POLICY IMPLICATIONS.

Some of the findings have meaningful implications for public policy-makers. The existence of consumer tolerance regions, for example, suggests that consumers may experience problems with the distribution system without responding in a negative way. Thus consumer manifestation of a negative response to the distribution system appears only after some number of negative experiences which push the consumer beyond the limit of tolerance. It would seem therefore that public policymakers should motivate dealers to move quickly to rectify problems brought to their attention, since it is likely that other problems exist which may have been tolerated by consumers.

In trying to improve consumer satisfaction with the distribution system, public policymakers should bear in mind that product performance also has an impact on consumer evaluation of the dealers. Thus while it is obviously useful and necessary to focus on the dealers themselves in order to improve the system, it is also important to consider product performance as an important factor in consumer satisfaction with the system.

The finding that, at the search stage, higher expectations are associated with somewhat more positive disconfirmation and hence higher satisfaction is gratifying from a public policy viewpoint. It could mean that consumers with higher expectations can act to influence the quality of the service they receive since, as indicated previously, the consumer is part of the production process. Thus, educational programs aimed at developing consumer skills and knowledge of what dealers can and should provide may be useful to consumers.

The results show, however, that the relationship described above is not as straightforward at the servicing stage. Indeed, at this stage it was found that higher expectations could lead to higher dissatisfaction levels instead of higher satisfaction levels. This finding means that public policymakers should be watchful of dealers who inflate consumer expectations about servicing without themselves providing the requisite performance. This is important because extensive dissatisfaction with the distribution system may eventually require legislative action.

Finally, Thirkell (1980) argues that "disconfirmation measures used in public policy research lend themselves to less ambiguous interpretation than straight measures of expectations" (p. 192). This research adds support to this view. The relationships found between aggregated disconfirmation and satisfaction measures were strong and direct. In addition, attribute-specific disconfirmation items provide some meaningful information to public policymakers by pinpointing potential problem areas. For example, in the case of new

automobile repairs, consumers reported rather high negative disconfirmation in at least two instances. First, repairs were not done correctly the first time and second, defective parts were not returned to consumers. These are two areas where public policymakers and managers could possibly work together to bring about some improvement.

7.4 IMPLICATIONS FOR CS/D THEORY AND RESEARCH

The first observation concerns the attribute by importance weight average scales used to measure several of the main constructs. The research showed that these measures are quite reliable and that reasonable confidence could be placed in them regarding content and construct validity. However, while the distributions of the two global expectations and the post-search satisfaction measures were normal, the distributions of post-servicing satisfaction and both post-search and post-servicing disconfirmation measures significantly departed from normality. This situation arose because a majority of consumers reported being in the satisfaction range, a familiar finding in CS/D research. But it also implies that caution should be used when analysing satisfaction data, especially when using statistical techniques which assume normality.

The major theoretical contribution of this study is that it tested the Expectancy Disconfirmation theory in relation to the distribution system of a durable product. This research assessed consumer satisfaction and its determinants within the context of two of the

consumer buying stages, the search and servicing stages. Consumers evaluated several aspects of their search for the best product (the most suitable one given their needs and situation) as well as many dimensions of after-sales service repair and maintenance done during the warranty period. A unique contribution of this study is that at both stages, the performance of the various dealers responsible for selling and servicing the product and not the product itself, was the focus of analysis.

This analysis was conducted in the context of a real-life purchase setting via a mail survey. To offset the disadvantages associated with after-the-fact recall measures, several steps were taken to ensure that the quality of the data collected would not be affected. All the respondents had purchased their new cars within a twelve month period and a check of consumer expectations showed that they were not affected by the length of time spent between the purchase and data collection. This study permitted the testing of several hypotheses derived from both experimental and survey streams of CS/D research, among them the simultaneous effect of expectations and disconfirmation on consumer satisfaction. It is believed that even though this study does not provide the control offered by an experimental setting, it offers more in terms of external validity and consumer involvement due to the real-life purchase setting adopted.

For the most part, the findings were consistent with the Expectancy Disconfirmation theory of CS/D. As in Thirkell's study (1980),

the data supported the contrast view of CS/D. At both stages, positive disconfirmation had a relatively larger impact upon consumer satisfaction given that negative disconfirmation was mediated by varying levels of consumer tolerance regions.

However, contrary to findings of Oliver (1977a, 1980) and Thirkell (1980), expectations were not independent of subsequent disconfirmation. The results showed a positive, even if small, relationship between these measures at both the search and servicing stages. This finding could be attributed to a response-bias caused by the recall procedure used. Some consumers may have experienced a halo effect. It is possible that they did not clearly remember their expectations, and recalled them as positive when their feelings of disconfirmation was positive. However, there is an alternative explanation to this result. Indeed, this finding may indicate that services differ from products in that the participation of consumers in the production of some services may influence both the output of the product effort and its evaluation by consumers. For example, consumers with higher expectations start with more positive attitudes towards dealers. As a result, they may behave in a way that encourages the dealers to provide them with a better service. Consequently, they may feel some more positive disconfirmation when evaluating their experience with the dealers relative to less optimistic consumers. Additional research involving longitudinal studies is needed to clarify which one of the two explanations is valid.

Another finding which was not reported in other CS/D studies is

the presence of an interaction effect between expectations and disconfirmation when investigating the simultaneous effect of these two constructs on satisfaction. This finding, which holds at both stages of the buying process, gives additional support to the second of the explanations provided above. Indeed, in the case of services, not only is satisfaction directly influenced by expectation and disconfirmation levels, but it is also a function of the interaction of these two variables. Additional research is needed to investigate if this relationship can be generalized to all types of services and retail outlets.

Thirkell (1980) hypothesised that the relationship between expectations and satisfaction is curvilinear. The data of this study support this hypothesis. However, the form of the relationship differed depending on the buying stage. At the servicing stage, higher expectation levels led to more extreme feelings of satisfaction or dissatisfaction, a result similar to that obtained by Thirkell. At the search stage, however, the higher their expectation levels, the more satisfied consumers felt. Future research is needed so as to clarify this discrepancy in the form of the relationship between the two stages. Is it peculiar to the automobile sector only? Or can it be explained by the fact that at the search stage, consumers evaluated their overall experience with several dealers while at the servicing stage, they evaluated their experience with one dealer only?

In addition to these findings which deal with the determinants of

consumer satisfaction at the search and servicing stages, an additional test was performed to assess the factors which contribute to overall satisfaction with the distribution system. The results indicate that overall satisfaction with the distribution of new automobiles is influenced firstly by the level of satisfaction felt with the dealer servicing the car while under warranty, followed by the amount of satisfaction experienced with the dealers visited during the search stage and the satisfaction felt regarding the performance of the car itself.

This finding suggests that overall satisfaction at the sub-system level, in this case the distribution system for a durable product, can be assessed by measuring consumer satisfaction at the various stages of the buying process. This type of measure can contribute to theory building by providing information on the relative impact of the different sub-system components on overall satisfaction. Additional studies are needed across a wide variety of non-durable, semi-durable and durable products in order to improve our understanding of the factors leading to consumer satisfaction and the attitudes and beliefs of consumers towards marketing practices in general. The same studies could also be useful in comparing the performance of different distribution systems and industries in meeting consumer needs and wants. This information, which could benefit marketing managers as well as public policymakers, could also be used to monitor the image and performance of the various sub-system actors over time.

Another set of results also holds some implications for theory. Firstly, adding gender to the list of independent variables influencing expectations increased the explanatory power of the model from 2.7% to 8.4% at the search stage, and from 9.7% to 10.9% at the servicing stage, while it had no direct impact on disconfirmation levels. These results indicate that women enter the different stages of the buying process for an automobile with higher expectations, a factor which can impact on subsequent feelings of satisfaction. Studies are needed to explain this finding. Is it peculiar to automobiles or can it be generalized to products with which women are less familiar and that are traditionally bought mainly by men, such as life insurance and financial planning services? Or is it that women use different mental processes than men to form their expectations?

Secondly and contrary to what was expected, adding the variable car origin to each expectations and disconfirmation model did not significantly increase the variance explained. Before trying to explain this unexpected finding, it might be wise to question the type of measurement used with this variable. Separating the cars according to whether they are North American or imported may be too crude to reflect the realities of the marketplace as seen by consumers. This dichotomous measure may not be sensitive enough to account for the different marketing practices adopted by the various car manufacturers. Future studies using alternative measures such as the country of origin (Japan, France, U.S.A., Germany) and the make of car (Renault, Honda, Toyota, Chrysler) may be useful.

Understanding the potential impact of car origin on expectations and disconfirmation is important since it may indicate if future satisfaction studies should be conducted within subpopulations or if one can ignore them and deal with the market at large.

Finally, most of the independent variable effects hypothesised in the research model were supported by the data. Pre-search expectations were influenced by individual characteristics and prior experience while pre-servicing expectations were influenced by pre-purchase search in addition to individual characteristics and prior experience. Disconfirmation levels at both stages were affected by individual characteristics and pre-purchase search but were independent of prior experience. These results again emphasize the need for including individual differences in future CS/D research.

In addition, this study throws some light on a problem experienced by Thirkell (1980). Contrary to his expectations, Thirkell found no significant relationship between consumer expectations and prior experience. The strong effect found between these two constructs at both stages of the buying process in the present study suggests that the measurement of experience used in Thirkell's study might be at fault. He used a scale which took into account consumer experience with up to five new and used cars to measure past satisfaction. He also used number of new and used cars owned in the past as measures of previous experience. This study suggests that consumers' expectations are influenced more by what happened in the recent past as opposed to their general experience. This study measured

consumer past satisfaction only in relation to the last car owned and the repair outlet which serviced that car. Also, general knowledge of car (a variable which considers the knowledge consumers had of the cars on the market and of car mechanics prior to engaging into their search) also appeared to influence consumer expectations. The last measure used, number of previously owned cars, did not appear to be related to either expectation measures. Future studies may indicate if experience measures dealing with the recent past are generally more pertinent to explain expectations or if they are better only when the market is rather volatile and the product durable. The latter indicates a situation where several years separate each purchase and where consumers cannot assume that the product and service offers have remained the same over the years.

The next step with respect to CS/D research at the sub-system level should be to conduct longitudinal studies across a wide array of products. This type of study could trace a consumer through the various stages of the buying process, starting from the time of search expectations to periodic measures of product and service satisfaction. This would be more appropriate since it could eliminate much of the "inter-consumer" variance in the data and allow for a deeper understanding of the phenomenon studied.

In summary, this study supports the Expectancy Disconfirmation theory of CS/D. It provides evidence of the existence of consumer tolerance regions at least with respect to negative disconfirmation. Expectations were positively related to disconfirmation levels. And overall

satisfaction with the distribution system was found to be function of search, servicing and product performance satisfaction.

It is hoped that this thesis will contribute towards filling the gaps in satisfaction research and theory building and that it will demonstrate the usefulness of using sub-system as the level of analysis in CS/D studies.

APPENDIX A

QUESTIONNAIRE, COVERING AND FOLLOW-UP LETTERS

The University of Western Ontario

DOCTORAL PROGRAM RESEARCH
School of Business Administration
London, Canada
N6A 3K7

September 1st, 1981

Dear Consumer,

I am conducting a nationwide survey on the opinions of Canadian consumers about the businesses they have dealt with. I am particularly interested in consumer's experiences when purchasing a new automobile and their evaluation of car dealers. I would appreciate your assistance in this study, which I am doing as a Ph.D. candidate at the School of Business Administration. The research project is a major requirement for earning my degree.

Your household was drawn in a random sample from across Canada. If your family bought a new automobile within the last year, I would appreciate it if the person who shopped for and actually purchased the new automobile would take time right now to complete and return the attached questionnaire. A reply-paid envelope is enclosed for your convenience.

To show my appreciation in a small way, I will make a one dollar contribution to the charity of your choice for completing the enclosed questionnaire. With support from a large number of individuals, this should result in a substantial contribution to charity.

You may be assured of complete confidentiality. Your answers will be combined with others in preparing summary information to help people in government and business better understand the problems of Canadian consumers.

Thank you for you assistance.

Sincerely,

Carole P. Duhaime
Ph.D. candidate

The University of Western Ontario

DOCTORAL PROGRAM RESEARCH
School of Business Administration
London, Canada
N6A 3K7

September 14th, 1981

Dear Consumer,

About two weeks ago I mailed you a questionnaire concerning the businesses you have dealt with and the products, particularly new automobiles, that you have bought. If you have sent in your completed questionnaire, then please accept my sincere thanks. If not, I would appreciate your taking the time righ now to complete it. In the event that your questionnaire has been misplaced, a replacement is enclosed.

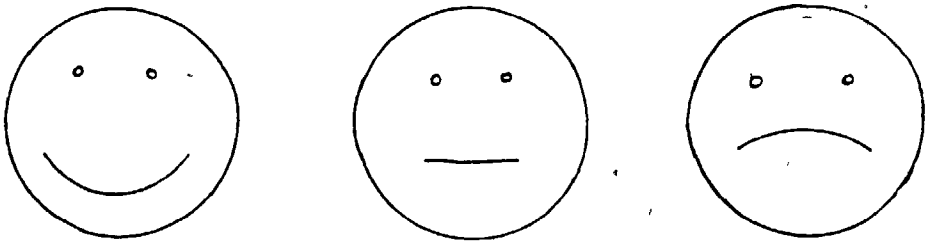
This research study is a good opportunity for Canadians to make their views known to people in government and business, and in particular to express any problems that they may have experienced. If you family has bought a new automobile within the last year, I would appreciate it if the person who shopped for and actually purchased the new automobile would take time to fill out the questionnaire. A return envelope is enclosed for your convenience.

As promised previously, I will make a one dollar donation to the charity of your choice for completing the questionnaire. With support from a large number of individuals, this will result in a substantial contribution to charity.

Your cooperation is greatly appreciated.

Sincerely,

Carole P. Duhaime
Ph.D. candidate



CONSUMER SATISFACTION STUDY

* * * * * * * * *

This is a nationwide survey of Canadian consumers, aimed at helping us to better understand how satisfied or dissatisfied people are with the businesses they have dealt with and the products they have bought. In particular, we are interested in the experiences of those who have purchased a new car recently. If you have shopped for and purchased a new car within the last year, please fill out this questionnaire.

We would appreciate if you were to answer all of the questions. If you wish to comment on any question or qualify your answers, feel free to use the space in the margins. Your comments will be read and taken into account.

Thank you for your help.

Carole Duhaime, School of Business Administration, U.W.O.
London, Canada N6A 3K7.

SECTION A. BUSINESS PRODUCTS AND PRACTICES

Q 1 Below is a series of statements about business products and practices within Canada.

Please circle one number on each line to indicate how much you agree or disagree with each. There are no right or wrong answers. We are only interested in your opinions.

	STRONGLY AGREE	AGREE	AGREE A LITTLE	DISAGREE A LITTLE	DISAGREE	STRONGLY DISAGREE
Advertising is a good source of information.	1	2	3	4	5	6
Many times I need assistance in a store and I'm just not able to get it.	1	2	3	4	5	6
Salesmen really take an interest in the consumer and make sure he finds what he wants.	1	2	3	4	5	6
Business firms usually stand behind their products and guarantees.	1	2	3	4	5	6
Many times the salesman says one thing to the shopper but he knows it's just the opposite	1	2	3	4	5	6
It is hard to make a buying decision because of all the products to choose from.	1	2	3	4	5	6
Most companies have a complaint department which backs up their products and handles consumer problems	1	2	3	4	5	6
Many companies listen to consumer complaints but they don't do anything about them.	1	2	3	4	5	6
The information on most packages is enough to make a good decision.	1	2	3	4	5	6
Service departments "pad" the bill by charging for unneeded work.	1	2	3	4	5	6
As soon as they make the sale, most businesses forget about the buyer.	1	2	3	4	5	6
Service manuals aren't provided for products because the company wants to make money servicing products as well as selling them	1	2	3	4	5	6
Repairs take too long because the right part is not in stock.	1	2	3	4	5	6
A warranty or guarantee may be a good one but the service department is often unable to do the work correctly.	1	2	3	4	5	6
Repair work is usually done right the first time.	1	2	3	4	5	6

SECTION B. NEW AUTOMOBILES

Q 2 Have you in the last year purchased a new automobile? (Circle number of correct answer)

1 NO (Go to section C, page 12) 2 YES (Please continue)

Q 3 When did you buy it? (Month and year) _____

Q 4 Who is the principal driver of this new automobile?
(Circle number of correct answer)

1 MYSELF 2 MY SPOUSE 3 OTHER _____

Q 5 How much do you know about the mechanical aspect of cars?

VERY LITTLE	LITTLE	SOME	GREAT DEAL	VERY GREAT DEAL
1	2	3	4	5

Q 6 Before shopping for your new car, how much did you know about the cars available in the market (brands, prices, models, etc...)?

VERY LITTLE	LITTLE	SOME	GREAT DEAL	VERY GREAT DEAL
1	2	3	4	5

Q 7 How many advertisements within each of the following sources did you use in selecting a make of car and a car dealer? (Circle number of correct answer)

SOURCE	NONE USED (0)	JUST A FEW (1-3)	SOME (4-6)	LARGE NUMBER (7 and over)
Television	0	1	2	3
Radio	0	1	2	3
Newspapers	0	1	2	3
Magazines	0	1	2	3

Q 8 How many of each of the following information sources did you use in selecting a make of car and a car dealer? (Put a number on the line)

ITEM	SOURCE	APPROXIMATE NUMBER USED	ITEM	SOURCE	APPROXIMATE NUMBER USED
1	Dealer Brochures	_____	5	Mechanics and Other Car Experts	_____
2	Better Business Bureau	_____	6	Members of Household	_____
3	Consumer Reports	_____	7	Friends and Relatives	_____
4	Technical Reports and Car Magazines	_____			

Q 9 Did anyone ever go with you to car dealers to help you with your purchase?

1 NO (Go to Question 10) 2 YES (Please continue)

If yes, a) How often did he (she) go? (Circle number of correct answer)

ONE TIME	TWO TIMES	THREE TIMES	FOUR OR MORE TIMES
1	2	3	4

3

b) Who accompanied you in your visits to car dealers? (Circle number of correct answer)

1 MY WIFE	3 A FEMALE FRIEND	5 A FEMALE RELATIVE
2 MY HUSBAND	4 A MALE FRIEND	6 A MALE RELATIVE

Q 10 Indicate below the manufacturer makes that were considered when buying this new car, the number of different dealers visited, and if a test drive was performed

	MAKES CONSIDERED (Circle answer)			NUMBER OF DIFFERENT DEALERS VISITED	TEST DRIVE PERFORMED (Circle answer)	
American Motors	1 NO	2 YES	if yes:	———	1 NO	2 YES
Chrysler	1 NO	2 YES	if yes:	———	1 NO	2 YES
Datsun	1 NO	2 YES	if yes:	———	1 NO	2 YES
Fiat	1 NO	2 YES	if yes:	———	1 NO	2 YES
Ford	1 NO	2 YES	if yes:	———	1 NO	2 YES
General Motors	1 NO	2 YES	if yes:	———	1 NO	2 YES
Honda	1 NO	2 YES	if yes:	———	1 NO	2 YES
Lada	1 NO	2 YES	if yes:	———	1 NO	2 YES
Renault	1 NO	2 YES	if yes:	———	1 NO	2 YES
Subaru	1 NO	2 YES	if yes:	———	1 NO	2 YES
Toyota	1 NO	2 YES	if yes:	———	1 NO	2 YES
Volkswagen	1 NO	2 YES	if yes:	———	1 NO	2 YES
Volvo	1 NO	2 YES	if yes:	———	1 NO	2 YES
Other_____	1 NO	2 YES	if yes:	———	1 NO	2 YES
Other_____	1 NO	2 YES	if yes:	———	1 NO	2 YES

Q 11 These questions get you to indicate <u>what you expected the dealers to be like</u> when you started looking for a new car to buy

Please place an X on each five-point scale to indicate what you expected from the car dealers. Where you did not think about some aspect, leave the whole line <u>blank</u> and move to the next line.

An example is provided for a person who before shopping for the new car, expected that the possibility of price negotiation would be <u>somewhat excellent</u>.

<u>EXAMPLE</u>: Possibility of price negotiation would be Poor: __:__:__:<u>X</u>:__ Excellent

WHEN I STARTED SHOPPING FOR A NEW CAR I EXPECTED THAT:

Dealership location and hours of operation	would be	INCONVENIENT	__:__:__:__:__:CONVENIENT
Choice of car models, colours, options	would be	FEW	__:__:__:__:__:MANY
Possibility of price negotiation	would be	POOR	__:__:__:__:__:EXCELLENT
Price offered for trade-in car	would be	HIGH	__:__:__:__:__:LOW
Salespeople's knowledge of product and warranty	would be	POOR	__:__:__:__:__:EXCELLENT

Salespeople's knowledge of repair and service needed	would be	POOR	: : : : : EXCELLENT
Salespeople's knowledge of competitors' cars	would be	POOR	: : : : : EXCELLENT
Respect shown to customers	would be	CONSIDERABLE	: : : : : LITTLE
Willingness to listen to customers' needs and wants	would be	CONSIDERABLE	: : : : : LITTLE
Pressure-selling	would be	HIGH	: : : : : LOW
Test drive offered	would be	NEVER	: : : : : ALWAYS
Anything else that you expected? (Please specify)			
_____	would be	_____	: : : : : _____

Q 12 This question asks you to indicate the importance of each aspect of car dealers at the time you started looking for a new car. Please place an X on each five-point scale to indicate how important the particular aspect was to you.

An example is provided for a person who thought that the possibility of price negotiation was neither important nor unimportant

EXAMPLE. Possibility of price negotiation	was	IMPORTANT	: : X : : UNIMPORTANT
Location and hours of operation	were	IMPORTANT	: : : : : UNIMPORTANT
Choice of models, colours, options	was	IMPORTANT	: : : : : UNIMPORTANT
Possibility of price negotiation	was	IMPORTANT	: : : : : UNIMPORTANT
Price offered for trade-in car	was	IMPORTANT	: : : : : UNIMPORTANT
Salespeople's knowledge of product and warranty	was	IMPORTANT	: : : : : UNIMPORTANT
Salespeople's knowledge of repair and service needed	was	IMPORTANT	: : : : : UNIMPORTANT
Salespeople's knowledge of competitors' cars	was	IMPORTANT	: : : : : UNIMPORTANT
Respect shown to customers	was	IMPORTANT	: : : : : UNIMPORTANT
Willingness to listen to customers' needs and wants	was	IMPORTANT	: : : : : UNIMPORTANT
Pressure-selling	was	IMPORTANT	: : : : : UNIMPORTANT
Test drive offered	was	IMPORTANT	: : : : : UNIMPORTANT
_____	was	IMPORTANT	: : : : : UNIMPORTANT

Q 13 At the time you started looking at new cars, how would you have rated your ability to judge the quality of a car?

LITTLE ABILITY	1	2	3	4	5	CONSIDERABLE ABILITY

Q 14 At the time you started looking at new cars, how confident were you in your ability to make a good choice?

LITTLE CONFIDENCE	1	2	3	4	5	CONSIDERABLE CONFIDENCE

Q 15 For many people, buying a new automobile presents some risks, for reasons such as the high cost of automobiles and the many brands available in the marketplace

These questions ask you to indicate what you think are the risks involved in purchasing a new automobile. Please circle the number corresponding to your answer for each question.

	LOW CHANCE				HIGH CHANCE
a) What are the chances that you stand to lose money if you buy a make of car with which you have no prior experience (either because it won't work at all, or because it costs more than it should to keep it running well)?	1	2	3	4	5
b) What is the likelihood that there will be something wrong with such a make of car or that it will not work properly?	1	2	3	4	5
c) What are the chances that such a make of car may not be safe; i.e. may be (or become) harmful or injurious to your health?	1	2	3	4	5
d) What are the chances that such a make of car will not fit in well with the way you think about yourself (i.e., your self-image or self-concept)?	1	2	3	4	5
e) What are the chances that such a make of car will affect the way others think of you?	1	2	3	4	5
f) What are the chances that such a make of car will lead to a loss of convenience for you because you would have to waste a lot of time and effort getting it adjusted and repaired?	1	2	3	4	5

Q 16 On the whole, considering all sorts of factors combined, about how risky would you say it was to buy a make of car with which you have no prior experience?

NOT RISKY AT ALL 1 2 3 4 5 EXTREMELY RISKY

Q 17 These questions ask you to indicate what the car dealers you visited were like compared to what you expected. Please circle one number on each five-point scale to indicate what the dealers were like. Where you have not thought about some aspect, leave the whole line blank and move to the next line.

An example is provided for a person who found the possibility of price negotiation offered by dealers to be worse than expected.

EXAMPLE: Possibility of price negotiation was 1 (2) 3 4 5

COMPARED TO WHAT I EXPECTED CAR DEALERS TO BE LIKE

		MUCH WORSE THAN EXPECTED	WORSE THAN EXPECTED	AS EXPECTED	BETTER THAN EXPECTED	MUCH BETTER THAN EXPECTED
Location and hours of operation	were	1	2	3	4	5
Choice of models, colours, options	was	1	2	3	4	5

		MUCH WORSE THAN EXPECTED	WORSE THAN EXPECTED	AS EXPECTED	BETTER THAN EXPECTED	MUCH BETTER THAN EXPECTED
Possibility of price negotiation	was	1	2	3	4	5
Price offered for trade-in car	was	1	2	3	4	5
Salespeople's knowledge of product and warranty	was	1	2	3	4	5
Salespeople's knowledge of repair and service needed	was	1	2	3	4	5
Salespeople's knowledge of competitors' cars	was	1	2	3	4	5
Respect shown to customers	was	1	2	3	4	5
Willingness to listen to customers' needs and wants	was	1	2	3	4	5
Pressure-selling	was	1	2	3	4	5
Test drive offered	was	1	2	3	4	5
Anything else? _____	was	1	2	3	4	5

Q 18 Overall, taking everything into consideration, my experience with the dealers I visited was

MUCH WORSE THAN EXPECTED	WORSE THAN EXPECTED	AS EXPECTED	BETTER THAN EXPECTED	MUCH BETTER THAN EXPECTED
1	2	3	4	5

Q 19 Please indicate below the extent to which you are satisfied or dissatisfied with the following aspects or characteristics of car dealers. Where you have not thought of some aspect, leave the whole line blank, and move to the next line (Circle number of answer)

	VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
Location and hours of operation	1	2	3	4	5
Choice of models, colours, options	1	2	3	4	5
Possibility of price negotiation	1	2	3	4	5
Price offered for trade-in car	1	2	3	4	5
Salespeople's knowledge of product and warranty	1	2	3	4	5
Salespeople's knowledge of repair and service needed	1	2	3	4	5
Salespeople's knowledge of competitors' cars	1	2	3	4	5
Respect shown to customers	1	2	3	4	5
Willingness to listen to customers' needs and wants	1	2	3	4	5
Pressure-selling	1	2	3	4	5
Test drive offered	1	2	3	4	5
_____	1	2	3	4	5

Q 20 Overall, how satisfied have you been with your experience with the dealers you visited in buying your new car?

VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
1	2	3	4	5

Q 21 In general, how trustworthy would you say car dealers are?

COMPLETELY TRUSTWORTHY				NOT AT ALL TRUSTWORTHY
1	2	3	4	5

Q 22 We would like you to indicate what you expected about the dealer servicing your new automobile at the time you purchased the car.

Please place an X on each five-point scale to indicate what you expected from the dealer. Where you did not think about some aspect, leave the whole line blank and move to the next line.

AT THE TIME I PURCHASED MY NEW AUTOMOBILE, I EXPECTED THAT

Follow-up after sale	would be	POOR: __:__:__:__:__:	EXCELLENT
Time from purchase to delivery of car	would be	RAPID: __:__:__:__:__:	SLOW
Quality of car preparation	would be	POOR: __:__:__:__:__:	HIGH
Servicepeople's willingness to solve problems/complaints	would be	LITTLE: __:__:__:__:__:	CONSIDERABLE
Range of repair services offered	would be	LIMITED: __:__:__:__:__:	EXTENSIVE
Quality of maintenance/repair work	would be	HIGH: __:__:__:__:__:	POOR
Quality of explanation on work to be done	would be	HIGH: __:__:__:__:__:	POOR
Cost of maintenance work compared to non-dealership outlets	would be	REASONABLE: __:__:__:__:__:	UNREASONABLE
Availability of parts	would be	POOR: __:__:__:__:__:	EXCELLENT
Time to get an appointment	would be	LONG: __:__:__:__:__:	SHORT
Warranty honoured by dealers	would be	NOT AT ALL: __:__:__:__:__:	COMPLETELY
Follow-up on repair work done	would be	NEVER: __:__:__:__:__:	ALWAYS
Repair done well first time	would be	NEVER: __:__:__:__:__:	ALWAYS
Repair done when promised	would be	NEVER: __:__:__:__:__:	ALWAYS
Estimates of costs	would be	ACCURATE: __:__:__:__:__:	INACCURATE
Return of defective parts to customers	would be	NEVER: __:__:__:__:__:	ALWAYS
Alternative transportation offered	would be	NEVER: __:__:__:__:__:	ALWAYS
Waiting room	would be	ADEQUATE: __:__:__:__:__:	INADEQUATE
Anything else that you expected? (Please specify)			
_____	would be	_____: __:__:__:__:__:	_____

Q 23 This question asks you to indicate the importance of each aspect of the dealer's service at the time you bought your new car. Please place an X on each five-point scale to indicate how important the particular aspect was to you.

Follow-up after sale	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Time from purchase to delivery of car	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Quality of car preparation	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Servicepeople's willingness to solve complaints/problems	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Range of repair services offered	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Quality of maintenance/repair work	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Quality of explanation on work to be done	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Cost of maintenance work compared to non-dealership outlets	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Availability of parts	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Time to get an appointment	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Warranty honoured by dealers	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Follow-up on repair work done	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Repair done well first time	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Repair done when promised	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Accuracy of cost estimates	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Return of defective parts to customers	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Alternative transportation offered	was IMPORTANT __:__:__:__:__:UNIMPORTANT
Existence of adequate waiting room	was IMPORTANT __:__:__:__:__:UNIMPORTANT
_____	was IMPORTANT __:__:__:__:__:UNIMPORTANT

Q 24 Had you purchased any automobile(s) previous to your most recently purchased new automobile? (Circle number of correct answer)

1 NO (Go to question 27) 2 YES (Please continue)

If yes:

a) How many automobiles (new or used) have you purchased, apart from your most recently purchased new automobile? _____

b) Name below the make of the automobile purchased before your most recent one?

MAKE	MODEL	YEAR OF PURCHASE	WAS IT PURCHASED NEW OR USED? CHECK (√) CORRECT ANSWER
_____	_____	_____	___ NEW or ___ USED

Q 25 How satisfied were you with the automobile owned before your most recent one? (Circle number of correct answer)

VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
1	2	3	4	5

Q 26 a) How satisfied or dissatisfied were you with the repair outlet servicing the automobile owned before your most recent one?

VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
1	2	3	4	5

b) Was this automobile serviced by: (Circle number of correct answer)

1 CAR DEALER 2 INDEPENDENT GARAGE 3 OTHER (Specify) _____

Q 27 These questions ask you to indicate what the dealer servicing your new car has been like compared to what you expected. Please circle one number on each five-point scale to indicate what the dealer has been like. Where you have not thought about some aspect, leave the whole line blank and move to the next line.

COMPARED TO WHAT I EXPECTED THE DEALER SERVICING MY NEW CAR TO BE LIKE

		MUCH WORSE THAN EXPECTED	WORSE THAN EXPECTED	AS EXPECTED	BETTER THAN EXPECTED	MUCH BETTER THAN EXPECTED
Follow-up after sale	has been	1	2	3	4	5
Time from purchase to delivery of car	has been	1	2	3	4	5
Quality of car preparation	has been	1	2	3	4	5
Servicepeople's willingness to solve complaints/problems	has been	1	2	3	4	5
Range of repair services offered	has been	1	2	3	4	5
Quality of maintenance/repair work	has been	1	2	3	4	5
Quality of explanation of work to be done	has been	1	2	3	4	5
Cost of maintenance work compared to non-dealership outlets	has been	1	2	3	4	5
Availability of parts	has been	1	2	3	4	5
Time to get an appointment	has been	1	2	3	4	5
Warranty honoured by dealers	has been	1	2	3	4	5
Follow-up on repair work done	has been	1	2	3	4	5
Repair done well first time	has been	1	2	3	4	5
Repair done when promised	has been	1	2	3	4	5
Accuracy of cost estimates	has been	1	2	3	4	5
Return of defective parts to customers	has been	1	2	3	4	5
Alternative transportation offered	has been	1	2	3	4	5
Waiting room	has been	1	2	3	4	5
Anything else?_____	has been	1	2	3	4	5

Q 28 Overall, taking everything into consideration, my dealer's service has been.

MUCH WORSE THAN EXPECTED	WORSE THAN EXPECTED	AS EXPECTED	BETTER THAN EXPECTED	MUCH BETTER THAN EXPECTED
1	2	3	4	5

Q 29 Please indicate below the extent to which you are satisfied or dissatisfied with the following aspects or characteristics of the dealer servicing your new automobile. Where you have not thought about some aspect, leave the whole line blank, and move to the next line. (Circle number of answer)

	VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
Follow-up after sale	1	2	3	4	5
Time from purchase to delivery of car	1	2	3	4	5
Quality of car preparation	1	2	3	4	5
Servicepeople's willingness to solve complaints/problems	1	2	3	4	5
Range of repair services offered	1	2	3	4	5
Quality of maintenance/repair work	1	2	3	4	5
Quality of explanation on work to be done	1	2	3	4	5
Cost of maintenance work compared to non-dealership outlets	1	2	3	4	5
Availability of parts	1	2	3	4	5
Time to get an appointment	1	2	3	4	5
Warranty honoured by dealers	1	2	3	4	5
Follow-up on repair work done	1	2	3	4	5
Repair done well first time	1	2	3	4	5
Repair done when promised	1	2	3	4	5
Accuracy of cost estimates	1	2	3	4	5
Return of defective parts to customers	1	2	3	4	5
Alternative transportation offered	1	2	3	4	5
Waiting room	1	2	3	4	5
Anything else?_____	1	2	3	4	5

Q 30 Overall, taking everything into consideration, how satisfied have you been so far with the dealer's servicing of your new car?

VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
1	2	3	4	5

Q 31 Now, taking everything into consideration, how satisfied are you with your experience with car dealers in buying your car and having your car serviced?

VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
1	2	3	4	5

Q 32 Overall, how satisfied have you been with your experience of owning and using your new automobile?

VERY SATISFIED	SOMEWHAT SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
1	2	3	4	5

Q 33 In general, how trustworthy would you say the dealer servicing your new car is?

COMPLETELY TRUSTWORTHY				NOT AT ALL TRUSTWORTHY
1	2	3	4	5

Q 34 Did you feel any discrimination due to your sex among car dealers, salespeople or servicepeople?

1 NO 2 YES

Q 35 We would like to get a few details about your new car.

MAKE	MODEL	YEAR	CURRENT KILOMETERS

Q 36 How many trips have you made to a dealer for warranty service since purchasing this car?

0 NONE
1 ONE
2 TWO
3 THREE
4 FOUR
5 FIVE
6 SIX OR MORE

Q 37 Where do you plan to have your car serviced after the warranty is expired?

1 DEALER WHERE BOUGHT THE CAR
2 OTHER CAR DEALER
3 INDEPENDENT GARAGE
4 OTHER (specify) _____

If not at the dealer where the car was bought, why?

_____

_____

_____

12

SECTION C. BACKGROUND INFORMATION

Finally, we would like some information to help us group your answers with others. Be assured that this information will be held in strict confidence.

Q 38 Please, indicate below the charity to which you would like us to send your one dollar contribution

1 CANADIAN HEART FOUNDATION
2 TERRY FOX'S MARATHON OF HOPE
3 CANADIAN RED CROSS SOCIETY
4 SALVATION ARMY
5 UNITED WAY

Q 39 In what province and in what sized community do you live?

PROVINCE _____

1 1,000 OR LESS
2 1,000 - 4,999
3 5,000 - 9,999
4 10,000 - 29,999
5 30,000 - 99,999
6 100,000 - 499,999
7 500,000 AND OVER

Q 40 Including yourself, how many people are living in your household?

1 ONE
2 TWO
3 THREE
4 FOUR
5 FIVE
6 SIX OR MORE

Q 41 Including yourself, how many people are driving your new automobile?

1 ONE
2 TWO
3 THREE
4 FOUR
5 FIVE
6 SIX OR MORE

Q 42 In which of the following age groups are you?

1 UNDER 25
2 25-34
3 35-44
4 45-54
5 55-64
6 65 OR OVER

Q 43 Are you.

1 MALE
2 FEMALE

Q 44 Are you at present:

1 SINGLE
2 MARRIED OR COMMON LAW
3 SEPARATED/DIVORCED
4 WIDOW/WIDOWER

Q 45 Are you:

1 EMPLOYED FULL-TIME
2 EMPLOYED PART-TIME
3 OTHER

Q 46 If employed, please give your occupation

_____

Q 47 What was the last grade of schooling that you completed?

1 8TH GRADE OR LESS
2 SOME HIGH SCHOOL
3 HIGH SCHOOL GRADUATE
4 SOME COLLEGE/TECHNICAL/UNIVERSITY
5 COMPLETED COLLEGE/TECHNICAL/UNIVERSITY
6 ADVANCED UNIVERSITY DEGREE

Q 48 What was the total combined 1980 income, before taxes, of <u>yourself</u>, and of <u>all the members of your household</u>, including yourself?

	YOURSELF		ALL MEMBERS OF YOUR HOUSEHOLD, INCLUDING YOURSELF
1	UNDER $5,000	1	UNDER $5,000
2	$ 5,000 - $ 9,999	2	$ 5,000 - $ 9,999
3	$10,000 - $14,999	3	$10,000 - $14,999
4	$15,000 - $19,999	4	$15,000 - $19,999
5	$20,000 - $24,999	5	$20,000 - $24,999
6	$25,000 - $29,999	6	$25,000 - $29,999
7	$30,000 - $34,999	7	$30,000 - $34,999
8	$35,000 OR MORE	8	$35,000 OR MORE

Is there anything else you would like to tell us about your experience of purchasing and owning a new automobile? If so, please use this space for that purpose.

If you wish, please add any additional comments that you think may help us in future efforts to understand more about what Canadian consumers want (either here or in a separate letter)

THANK YOU VERY MUCH FOR YOUR HELP

APPENDIX B

SAMPLE CHARACTERISTICS

RESPONDENT GENDER BY ORIGIN OF CAR

COUNT (COL %) GENDER	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
MALE	168 (68.0)	87 (69.0)	255 (68.4)
FEMALE	79 (32.0)	39 (31.0)	118 (31.6)
COLUMN TOTAL	247 (66.2)	126 (33.8)	373 (100.0)

CHI-SQUARE : .01 WITH 1 DEGREE OF FREEDOM

SIGNIFICANCE : .9324

RESPONDENT AGE BY ORIGIN OF CAR

COUNT (COL %) AGE	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
UNDER 25	38 (15.4)	18 (14.3)	56 (15.0)
25-34	46 (18.6)	48 (38.1)	94 (25.2)
35-44	42 (17.0)	23 (18.3)	65 (17.4)
45-54	39 (15.8)	13 (10.3)	52 (13.9)
55-64	49 (19.8)	13 (10.3)	62 (16.6)
65 OR OVER	33 (13.4)	11 (8.7)	44 (11.8)
COLUMN TOTAL	247 (66.2)	126 (33.8)	373 (100.0)

CHI-SQUARE : 20.55 WITH 5 DEGREES OF FREEDOM

SIGNIFICANCE : .0010

RESPONDENT MARITAL STATUS BY ORIGIN OF CAR

COUNT (COL %) MARITAL STATUS	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
SINGLE	54 (22.0)	36 (28.6)	90 (24.2)
MARRIED OR COMMON LAW	174 (70.7)	85 (67.5)	259 (69.6)
SEPARATED OR DIVORCED	3 (1.2)	3 (2.4)	6 (1.6)
WIDOW-WIDOWER	15 (6.1)	2 (1.6)	17 (4.6)
COLUMN TOTAL	246 (66.1)	126 (33.9)	372 (100.0)

CHI-SQUARE : 6.04 WITH 3 DEGREES OF FREEDOM

SIGNIFICANCE : .1095

RESPONDENT EDUCATION BY ORIGIN OF CAR

COUNT (COL %) EDUCATION	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
8TH GRADE OR LESS	15 (6.1)	6 (4.8)	21 (5.7)
SOME HIGH SCHOOL	53 (21.7)	11 (8.8)	64 (17.3)
HIGH SCHOOL GRAD	55 (22.5)	29 (23.2)	84 (22.8)
SOME COLLEGE	39 (16.0)	19 (15.2)	58 (15.7)
COLLEGE GRADUATE	53 (21.7)	41 (32.8)	94 (25.5)
ADVANCED UNIVERSITY	29 (11.9)	19 (15.2)	48 (13.0)
COLUMN TOTAL	244 (66.1)	125 (33.9)	369 (100.0)

CHI-SQUARE : 12.94 WITH 5 DEGREES OF FREEDOM

SIGNIFICANCE : .0239

RESPONDENT EMPLOYMENT STATUS BY ORIGIN OF CAR

COUNT (COL %) EMPLOYMENT STATUS	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
FULL-TIME	164 (66.4)	95 (75.4)	259 (69.4)
PART-TIME	15 (6.1)	10 (7.9)	25 (6.7)
OTHER	68 (27.5)	21 (16.7)	89 (23.9)
COLUMN TOTAL	247 (66.2)	126 (33.8)	373 (100.0)

CHI-SQUARE : 5.53 WITH 2 DEGREES OF FREEDOM

SIGNIFICANCE : .0629

RESPONDENT OCCUPATION BY ORIGIN OF CAR

COUNT (COL %) OCCUPATION	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
BLUE COLLAR	33 (15.4)	11 (10.0)	44 (13.6)
WHITE COLLAR	46 (21.5)	17 (15.5)	63 (19.4)
MANAGERIAL OR PROFESSIONNAL	47 (22.0)	32 (29.1)	79 (24.4)
TECHNICAL OR SPECIALIST	24 (11.2)	15 (13.6)	39 (12.0)
COMMUNITY SERVICE	22 (10.3)	15 (13.6)	37 (11.4)
FARMING	7 (3.3)	0 (0.0)	7 (2.2)
RETIRED	25 (11.7)	8 (7.3)	33 (10.2)
STUDENT	1 (0.5)	2 (1.8)	3 (0.9)
OTHER	9 (4.2)	10 (9.1)	19 (5.9)
COLUMN TOTAL	214 (66.0)	110 (34.0)	324 (100.0)

CHI-SQUARE : 14.89 WITH 8 DEGREES OF FREEDOM

SIGNIFICANCE : .0612

RESPONDENT HOUSEHOLD SIZE BY ORIGIN OF CAR

COUNT (COL %) HOUSEHOLD SIZE	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
ONE	27 (11.0)	12 (9.5)	39 (10.5)
TWO	102 (41.5)	47 (37.3)	149 (40.1)
THREE	50 (20.3)	23 (18.3)	73 (19.6)
FOUR	32 (13.0)	31 (24.6)	63 (16.9)
FIVE	23 (9.3)	8 (6.3)	31 (8.3)
SIX OR MORE	12 (4.9)	5 (4.0)	17 (4.6)
COLUMN TOTAL	246 (66.1)	126 (33.9)	372 (100.0)

CHI-SQUARE : 8.37 WITH 5 DEGREES OF FREEDOM

SIGNIFICANCE : .1367

PRINCIPAL DRIVER'S INCOME BY ORIGIN OF CAR

COUNT (COL %) INCOME	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
UNDER 5000	14 (6.5)	9 (8.4)	23 (7.1)
5000-9999	17 (7.9)	7 (6.5)	24 (7.5)
10000-14999	30 (14.0)	16 (15.0)	46 (14.3)
15000-19999	39 (18.1)	16 (15.0)	55 (17.1)
20000-24999	42 (19.5)	23 (21.5)	65 (20.2)
25000-29999	17 (7.9)	13 (12.1)	30 (9.3)
30000-34999	18 (8.4)	8 (7.5)	26 (8.1)
35000 OR MORE	38 (17.7)	15 (14.0)	53 (16.5)
COLUMN TOTAL	215 (66.8)	107 (33.2)	322 (100.0)

CHI-SQUARE : 3.18 WITH 7 DEGREES OF FREEDOM

SIGNIFICANCE : .8677

HOUSEHOLD INCOME BY ORIGIN OF CAR

COUNT (COL %) INCOME	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
UNDER 5000	3 (1.9)	1 (1.0)	4 (1.6)
5000-9999	5 (3.1)	1 (1.0)	6 (2.3)
10000-14999	16 (10.0)	5 (5.2)	21 (8.2)
15000-19999	20 (12.5)	11 (11.5)	31 (12.1)
20000-24999	17 (10.6)	13 (13.5)	30 (11.7)
25000-29999	11 (6.9)	5 (5.2)	16 (6.3)
30000-34999	17 (10.6)	10 (10.4)	27 (10.5)
35000 OR MORE	71 (44.4)	50 (52.1)	121 (47.3)
COLUMN TOTAL	160 (62.5)	96 (37.5)	256 (100.0)

CHI-SQUARE : 4.57 WITH 7 DEGREES OF FREEDOM

SIGNIFICANCE : .7123

RESPONDENT COMMUNITY SIZE BY ORIGIN OF CAR

COUNT (COL %) COMMUNITY SIZE	ORIGIN OF CAR		
	DOMESTIC	IMPORTED	ROW TOTAL
1000 OR LESS	44 (18.2)	11 (8.8)	55 (15.0)
1000-4999	37 (15.3)	9 (7.2)	46 (12.5)
5000-9999	40 (16.5)	21 (16.8)	61 (16.6)
10000-29999	61 (25.2)	30 (24.0)	91 (24.8)
30000-99999	11 (4.5)	5 (4.0)	16 (4.4)
100000-499999	11 (4.5)	3 (2.4)	14 (3.8)
500000 & OVER	38 (15.7)	46 (36.8)	84 (22.9)
COLUMN TOTAL	242 (65.9)	125 (34.1)	367 (100.0)

APPENDIX C

SPEARMAN RANK COEFFICIENTS

SPEARMAN RANK CORRELATIONS
BETWEEN EXPECTATIONS AND DISCONFIRMATION

	SPEARMAN COEFF.	SIGNIF. LEVEL
SEARCH STAGE	.2695	.001
SERVICING STAGE	.1070	.022

RELATIONSHIP BETWEEN EXPECTATIONS AND DISCONFIRMATION
FOR POSITIVE AND NEGATIVE DISCONFIRMATION GROUPS

	POSITIVE DISCONF.	NEGATIVE DISCONF.
	SPEARMAN COEFF.	SPEARMAN COEFF.
SEARCH STAGE	.3284 (.001)*	.0289 (.361)
SERVICING STAGE	.0849 (.155)	-.2231 (.001)

* Significance levels are shown in parentheses

SPEARMAN RANK CORRELATIONS
BETWEEN EXPECTATIONS AND SATISFACTION

	SPEARMAN COEFF.	SIGNIF. LEVEL
SEARCH STAGE	.4110	.001
SERVICING STAGE	.3103	.001

RELATIONSHIP BETWEEN EXPECTATIONS AND SATISFACTION FOR SATISFIED AND DISSATISFIED CONSUMERS

	SPEARMAN RANK CORRELATIONS	
	SATISFIED CONSUMERS	DISSATISFIED CONSUMERS
SEARCH STAGE	.3816 (.001)*	-.0779 (.261)
SERVICING STAGE	.3959 (.001)	-.4082 (.001)

* Significance levels are shown in parentheses.

SPEARMAN RANK CORRELATIONS BETWEEN SATISFACTION AND DISCONFIRMATION

	SPEARMAN COEFF.	SIGNIF. LEVEL
SEARCH STAGE	.5678	.001
SERVICING STAGE	.6143	.001

CORRELATIONS BETWEEN OVERALL SATISFACTION WITH THE DISTRIBUTION SYSTEM AND THE OTHER SATISFACTION MEASURES

	SPEARMAN COEFF.	SIGNIF. LEVEL
POST-SEARCH SATISFACTION	.4935	.001
POST-SERVICING SATISFACTION	.7295	.001
PRODUCT PERFORMANCE SATISFACTION	.4372	.001

APPENDIX D - TABLE 1

TEST OF HYPOTHESIS H1: REGRESSION ANALYSIS - SEARCH STAGE

Dependent variable: Post-search disconfirmation
Independent variable: Pre-search expectations

MULTIPLE R	0.27505
R SQUARE	0.07565
ADJUSTED R SQUARE	0.07316
STANDARD ERROR	1.59128

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	76.88790	76.88790
RESIDUAL	371	939.43535	2.53217

F = 30.36442 SIGNIF F = 0.0000

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
Expectations	0.13506	0.02451	0.27505	5.510	0.0000
(CONSTANT)	-1.79681	0.36316		-4.948	0.0000

REGRESSION ANALYSIS - SERVICING STAGE

Dependent variable : Post-servicing disconfirmation
Independent variable: Pre-servicing expectations

MULTIPLE R	0.05879
R SQUARE	0.00346
ADJUSTED R SQUARE	0.00070
STANDARD ERROR	2.38720

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	7.13478	7.13478
RESIDUAL	361	2057.24637	5.69874

F = 1.25199 SIGNIF F = 0.2639

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
Expectations	0.03611	0.03227	0.05879	1.119	0.2639
(CONSTANT)	-0.58629	0.57202		1.025	0.3061

Apparently, these measures were inadequate given the type of product and market investigated. Measures which deal with the most recent experience of the consumer may be more relevant when the product under investigation changes constantly and when the corresponding market is very dynamic. In addition, consumers tend to remember better the recent past as opposed to something which happened years ago, as is often the case with the purchase of durable products such as cars.

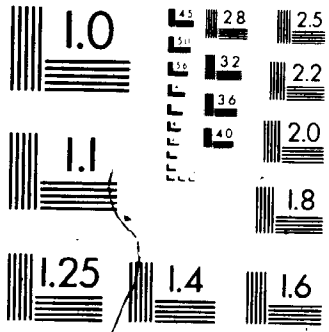
Hypothesis Set H9: Prepurchase Search

This set of hypotheses stated that the more consumers search prior to buying a new car, the more likely they are to lower their pre-servicing expectations. This set of hypotheses stems from the belief that as consumers are exposed to more sources of information, they become more aware of the realities of the marketplace. They therefore obtain more information not only on the product they want to buy, but also on the different dealers servicing this product. This awareness encourages consumers to develop more realistic and thus, somewhat lower expectations about the dealer who will service their new car while under warranty.

The results indicate that this relationship holds for nine of the ten search dimensions. But the relationships are significant at the .05 level only for five of them. These dimensions are impersonal independent depth, personal advocate variety and depth and direct observation variety and depth. Apparently, as consumers read more reports about cars and dealers' service, as the number of car dealers

4 4

OF/DE



APPENDIX D - TABLE 2

TEST OF HYPOTHESIS H1: REGRESSION ANALYSIS -- SEARCH STAGE

Dependent variable: Post-search disconfirmation
Independent variable: Pre-search expectations

POSITIVE DISCONFIRMATION

MULTIPLE R	0.39157
R SQUARE	0.15333
ADJUSTED R SQUARE	0.14846
STANDARD ERROR	1.10505

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	38.47785	38.47785
RESIDUAL	174	212.47769	1.22114

F = 31.50988 SIGNIF F = 0.0000

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
Expectations	0.13921	0.02480	0.39157	5.613	0.0000
(CONSTANT)	-0.70124	0.38077		-1.842	0.0672

NEGATIVE DISCONFIRMATION

MULTIPLE R	0.00879
R SQUARE	0.00008
ADJUSTED R SQUARE	-0.00642
STANDARD ERROR	1.17547

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	0.01645	0.01645
RESIDUAL	154	212.78583	1.38173

F = 0.01191 SIGNIF F = 0.9133

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
Expectations	-0.00332	0.03047	-0.00879	-0.109	0.9133
(CONSTANT)	-1.15294	0.42359		-2.722	0.0072

APPENDIX D - TABLE 3

TEST OF HYPOTHESIS H1: REGRESSION ANALYSIS - SERVICING STAGE

Dependent variable: Post-servicing disconfirmation
Independent variable: Pre-servicing expectations

POSITIVE DISCONFIRMATION

MULTIPLE R	0.19492
R SQUARE	0.03799
ADJUSTED R SQUARE	0.03127
STANDARD ERROR	1.98341

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	22.21665	22.21665
RESIDUAL	143	562.54871	3.93391

F = 5.64748 SIGNIF F = 0.0188

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
Expectations	0.11693	0.04920	0.19492	2.376	0.0188
(CONSTANT)	-0.16773	0.88342		-0.190	0.8497

NEGATIVE DISCONFIRMATION

MULTIPLE R	0.30052
R SQUARE	0.09031
ADJUSTED R SQUARE	0.08433
STANDARD ERROR	1.76000

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE
REGRESSION	1	46.74236	46.74236
RESIDUAL	152	470.83534	3.09760

F = 15.08986 SIGNIF F = 0.0002

VARIABLES IN THE EQUATION

VARIABLE	B	SE B	BETA	T	SIG T
Expectations	-0.13669	0.03519	-0.30052	-3.885	0.0002
(CONSTANT)	0.53661	0.59149		0.907	0.3657

APPENDIX E

EXPECTATIONS STEPWISE REGRESSION RESULTS

DEPENDENT VARIABLE = PRE-SEARCH EXPECTATIONS

R SQUARE:	7.76
ADJ.R SQUARE:	7.00
N:	370
F:	10.26

INDEPENDENT VARIABLE	Beta	T	SIG T
GENDER	-.24	-4.67	.0000
AGE	.11	2.21	.0279
MARKET BELIEFS	-.10	-2.00	.0459

DEPENDENT VARIABLE = PRE-SERVICING EXPECTATIONS

R SQUARE:	8.03
ADJ.R SQUARE:	7.15
N:	318
F:	9.14

INDEPENDENT VARIABLE	Beta	T	SIG T
GENDER	-.20	-3.61	.0004
AGE	.15	2.66	.0083
PERSONAL ADVOCATE DEPTH	-.12	-2.10	.0363

APPENDIX F

DISCONFIRMATION STEPWISE REGRESSION RESULTS

DEPENDENT VARIABLE = POST-SEARCH DISCONFIRMATION

R SQUARE:	7.43
ADJ.R SQUARE:	6.92
N:	366
F:	14.56

INDEPENDENT VARIABLE	Beta	T	SIG T
PERSONAL ADVOCATE VARIETY	-.20	-3.87	.0001
MARKET BELIEFS	.16	-3.07	.0023

DEPENDENT VARIABLE = POST-SERVICING DISCONFIRMATION

R SQUARE:	2.70
ADJ.R SQUARE:	2.42
N:	359
F:	9.89

INDEPENDENT VARIABLE	Beta	T	SIG T
MARKET BELIEFS	-.16	-3.15	.0018

APPENDIX G

EXPECTATION MEANS BY GENDER

PRE-SEARCH EXPECTATIONS	MEAN MALE	MEAN FEMALE	T VALUE	2 TAIL PROB
Dealership location	3.90	4.03	-0.95	.343
Choice of models	3.53	3.92	-2.59	.010
Price negotiation	3.21	3.27	-0.36	.718
Trade-in car	1.99	1.98	-0.05	.959
Knowledge of product	3.86	4.15	-2.38	.018
Knowledge of repair	3.38	3.58	-1.37	.173
Knowledge of competition	2.88	3.17	-1.93	.054
Respect shown	4.03	4.30	-2.06	.040
Willingness to listen	3.86	4.16	-2.19	.029
Pressure-selling	3.07	2.58	2.99	.003
Test drive offered	4.21	4.24	-0.26	.794

PRE-SERVICING EXPECTATIONS	MEAN MALE	MEAN FEMALE	T VALUE	2 TAIL PROB
Follow-up after sale	3.35	3.70	-2.46	.014
Delivery time	3.78	4.02	-1.69	.091
Car preparation	4.11	4.38	-2.41	.017
Problem-solving	3.94	4.11	-1.33	.186
Range of services	3.93	4.03	-0.76	.447
Quality of repair	3.79	4.16	-2.65	.008
Quality of explanation	3.48	3.76	-1.79	.074
Cost of dealer work	3.02	3.36	-1.89	.059
Availability of parts	3.79	4.13	-2.53	.012
Appointment time	3.87	4.09	-1.67	.096
Warranty honoured	4.34	4.45	-0.94	.350
Follow-up repair	3.12	3.60	-2.83	.005
Repair done 1st time	3.66	4.03	-2.42	.016
Repair done when promised	3.95	4.21	-1.89	.060
Cost estimates	3.48	3.95	-2.83	.005
Return of defective parts	2.35	2.47	-0.59	.556
Alternative transportation	2.84	3.03	-1.00	.318
Waiting room	3.38	3.78	-2.19	.029

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